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FOOD AND AGRICULTURAL ORGANIZATION OF THE UN BACKGROUND GUIDE 2018

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Dear Delegates,

Welcome to the 2018 National Model United Nations New York Conference (NMUN•NY)! We are pleased to welcome you to the Food and Agriculture Organization (FAO). This year's staff are: Directors Courtney Indart (Conference A) and Lauren Kiser (Conference B), and Assistant Directors Sara Belligoni (Conference A) and Benjamin Wrigley (Conference B). Courtney is pursuing her M.A. in International Affairs at George Washington University. Lauren received a B.A. in Political and a B.A. in International Economics from Texas Christian University. She completed her M.A. in 2016 from the Josef Korbel School of International Studies in and currently works for a renewable energy company. Sara earned an M.A. in International Relations from Università degli Studi Roma Tre and is a Geopolitical Analyst. Ben received his binational bachelor's degree in England and Germany in 2017. He is pursuing his master's degree in mechanical engineering at the University of Siegen.

The topics under discussion for the Food and Agriculture Organization of the United Nations are:

1. Growing Green Cities Through Urban Agriculture
2. Promoting Sustainable Agricultural Practices
3. Implementing Strategies for Agricultural Development in Post-Emergency Response Plans

The Food and Agriculture Organization of the United Nations is the primary specialized agency coordinating the efforts towards the eradication of hunger and food insecurity. FAO works closely with Member States and related UN organizations to collect and analyze nutrition data, provide technical assistance to Member States, and organize programmes and missions. FAO's primary work is through setting policy, determining the strategic objectives of the FAO, and making recommendations on issues pertaining to FAO's mission. In order to propose solutions aimed at eradicating hunger and malnutrition, address international crises, and to accurately simulate the committee, it is imperative for delegates to understand FAO's mandate in order to improve world-wide nutrition.

This Background Guide serves as an introduction to the topics for this committee. However, 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. In preparation for the Conference, each delegation will submit a [Position Paper](#) by 11:59 p.m. (Eastern) on 1 March 2018 in accordance with the guidelines in the [NMUN Position Paper Guide](#).

Two resources, to download from the [NMUN website](#), that serve as essential instruments in preparing for the Conference and as a reference during committee sessions are the:

1. [NMUN Delegate Preparation Guide](#) - explains each step in the delegate process, from pre-Conference research to the committee debate and resolution drafting processes. Please take note of the information on plagiarism, and the prohibition on pre-written working papers and resolutions. Delegates should not start discussion on the topics with other members of their committee until the first committee session.
2. [NMUN Rules of Procedure](#) - include the long and short form of the rules, as well as an explanatory narrative and example script of the flow of procedure.

In addition, please review the mandatory [NMUN Conduct Expectations](#) on the NMUN website. They include the Conference dress code and other expectations of all attendees. We want to emphasize that any instances of sexual harassment or discrimination based on race, gender, sexual orientation, national origin, religion, age, or disability will not be tolerated.

If you have any questions concerning your preparation for the committee or the Conference itself, please contact the Under-Secretaries-General for the Development Department, Moritz Müller (Conference A) and Maximilian Jungmann (Conference B), at usg.development@nmun.org.

We wish you all the best in your preparations and look forward to seeing you at the Conference!

Conference A

Courtney Indart, Director
Sara Belligoni, Assistant Director

Conference B

Lauren Kiser, Director
Benjamin Wrigley, Assistant Director



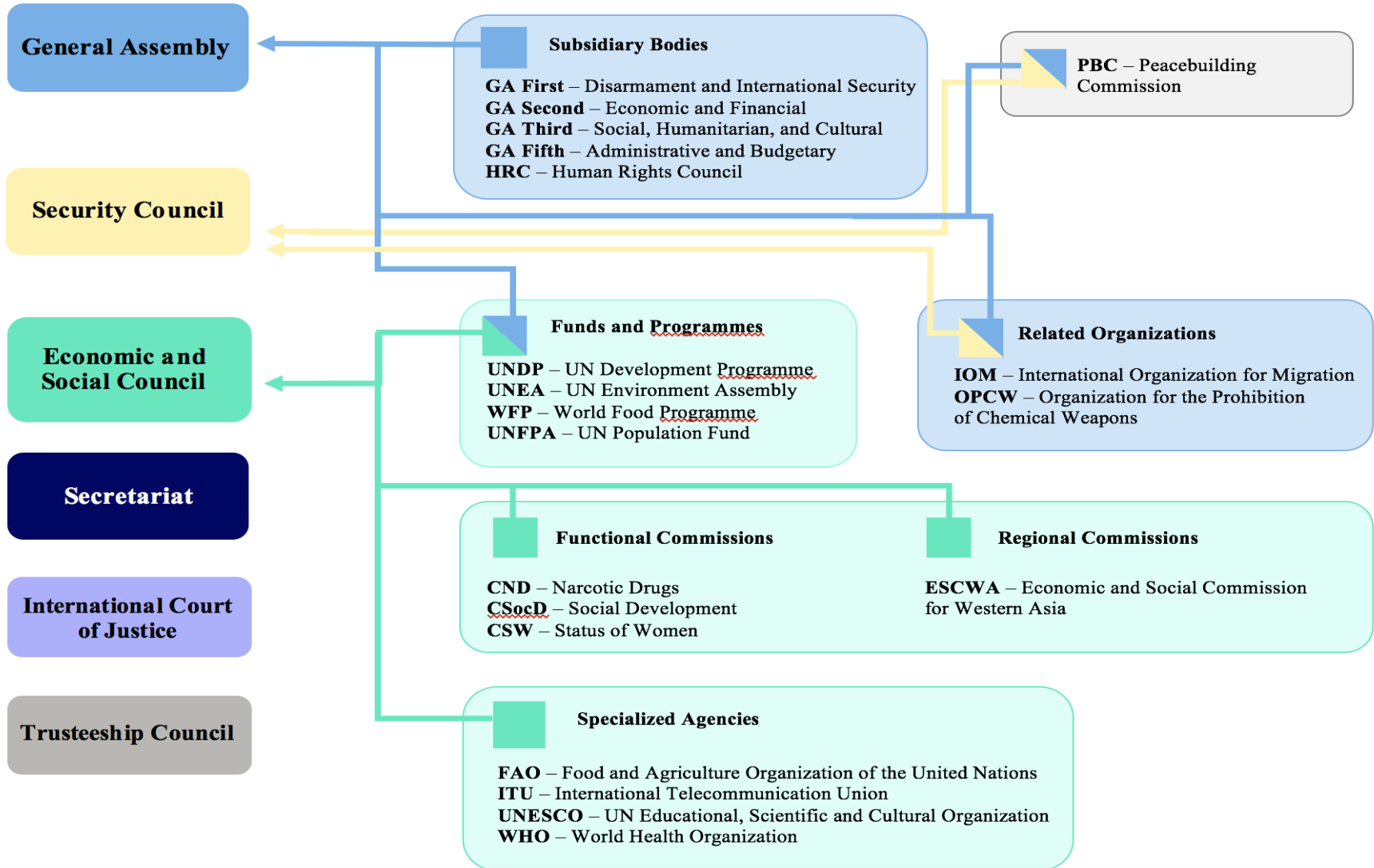
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United Nations System at NMUN•NY

This diagram illustrates the UN system simulated at NMUN•NY and demonstrates the reportage and relationships between entities. Examine the diagram alongside the Committee Overview to gain a clear picture of the committee's position, purpose, and powers within the UN system.



Abbreviations

AAUACP	Addis Ababa Urban Agriculture Core Process
AC	African Union
APEC	Asia-Pacific Economic Cooperation
CELAC	Community of Latin American and Caribbean States
CESCR	Committee on Economic, Social, and Cultural Rights
CGIAR	Consultative Group on International Agricultural Research
COAG	Committee on Agriculture
CRS	Catholic Relief Services
CSA	Climate-smart agriculture
CSO	Civil Society Organization
DRC	Democratic Republic of the Congo
ECOSOC	Economic and Social Council
EIP-AGRI	European Innovation Partnership for Agricultural productivity and Sustainability
	Emergency Prevention System for Plant and Animal Pests and Diseases
EMPRES	Emergency Preparedness and Response Plans
EPREPs	Emergency Preparedness and Response Plans
EU	European Union
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FFS	Farmer field schools
GFSC	Emergency Global Food Security Cluster
GIEWS	Global Information and Early Warning System
Habitat III	UN Conference on Housing and Sustainable Urban Development
IASC	Inter-Agency Standing Committee
IFAD	International Fund for Agricultural Development
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute's
IIA	International Institute of Agriculture
INUAg	International Network for Urban Agriculture
IPM	Integrated Pest Management
LOG	Liaison Office in Geneva
MDG	Millennium Development Goals
MTP	<i>Director-General's Medium Term Plan</i>
NAP	National Adaptation Plan
NGO	Non-Governmental Organization
OCHA	UN Office for the Coordination of Humanitarian Affairs
PDNA/RF	Post-Disaster Needs Assessment and Recovery Framework
PHT	Pacific Humanitarian Team
PWB	<i>Programme of Work and Budget</i>
RUAF	Research Centre for Urban Agriculture and Forestry
SDG	Sustainable Development Goal
SFERA	Special Fund for Emergency and Rehabilitation
SIDS	Small Island Developing States
TECA	Technologies and Practices for Small Agricultural Producers
UDHR	<i>Universal Declaration of Human Rights</i>
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UN-Habitat	UN Human Settlements Programme
UNICEF	United Nations Children's Fund
UNISDR	UN Office for Disaster Risk Reduction
WABEF	Western Africa Bio-wastes for Energy and Fertilizer
WECD	World Commission on Environment and Development



WFC	World Food Conference
WFP	World Food Programme
WHO	World Health Organization

Committee Overview

Introduction

The Food and Agriculture Organization of the United Nations (FAO), founded in 1945, is the leading intergovernmental organization coordinating efforts towards the eradication of hunger and food insecurity.¹ FAO facilitates partnerships between the United Nations (UN), Non-Governmental Organizations (NGOs), Civil Society Organizations (CSOs), Member States, the private sector, and other stakeholders.² Through the variety of functions that FAO performs, it works to reduce hunger, malnutrition, and food insecurity; increase the sustainability and productiveness of agriculture, forestry, and fisheries; reduce rural poverty; enable inclusive and efficient agriculture and food systems; and improve the resilience of livelihoods to disasters.³

The **Food and Agriculture Organization of the United Nations (FAO)** is a specialized agency, which coordinates with the United Nations through the Economic and Social Council.

The International Institute of Agriculture (IIA) was founded in 1905 in Rome to study the state of agriculture and disseminate the information gathered.⁴ In 1943, the Interim Commission on Food and Agriculture was established in order to create a permanent agricultural organization, which eventually led to FAO.⁵ Shortly after the end of the Second World War, the constitution of FAO was signed at the First Session of the Conference of the Food and Agricultural Organization of the United Nations and entered into force on 16 October 1945.⁶ FAO inherited the statistical functions of the IIA and while FAO has a much broader mandate and reach, the core mission between the IIA and FAO remained largely the same: the needs of farmers, agriculture, and economic development.⁷

In its first two decades, FAO oversaw the establishment of important international agricultural agreements and institutions, including the World Food Programme (WFP) in 1961.⁸ In 1974, amid famine and global food crises, the first World Food Conference convened in Rome, Italy.⁹ Member States adopted the *Universal Declaration on the Eradication of Hunger and Malnutrition* (1974) proclaiming that, “every man, woman and child has the inalienable right to be free from hunger and malnutrition in order to develop fully and maintain their physical and mental faculties.”¹⁰ In commemoration of the founding of FAO, the FAO Conference adopted in 1979 Resolution 1/79, establishing World Food Day, which shall be observed on 16 October.¹¹ At the World Food Summit in 1996 the *Rome Declaration on World Food Security* and the *World Food Summit Plan of Action* were adopted.¹² Both recognize seven broad commitments such as, the eradication of poverty, implementation of policies to improve physical and economic access of nutritionally adequate and safe food, and sustainable food, agriculture, fisheries, forestry, and rural development practices.¹³

Governance, Structure, and Membership

FAO is a specialized agency of the United Nations (UN) and reports to the Economic and Social Council (ECOSOC).¹⁴ FAO currently consists of 194 members, two associate members (Faroe Islands and Tokelau), and one member organization (European Union).¹⁵ The primary body of FAO is the Conference of Member Nations established by Article III of the FAO constitution, which meets every two years in regular session. The Conference

¹ FAO, *About FAO*, 2017.

² Ibid.

³ Ibid.

⁴ FAO, *FAO - its origins, formation and evolution 1945-1981*, 1981, p. 3-5.

⁵ Ibid., p. 12-13.

⁶ Ibid., p. 13.

⁷ Ibid., FAO, *About FAO*, 2017.

⁸ Ibid.

⁹ FAO, *World Food Summit*.

¹⁰ FAO, *World Food Summit*; UNOHCHR, *Declaration on the Eradication of Hunger Malnutrition*, 1996-2017.

¹¹ FAO, *Major Trends and policies in food and agriculture*.

¹² FAO, *World Food Summit*.

¹³ Ibid.

¹⁴ New Zealand, *United Nations Handbook 2013-14*, 2013.

¹⁵ FAO, *Legal Office: FAO Members*.

can vote to meet the following year in a special session.¹⁶ Each Member State and Associate Member is represented by one delegate carrying one vote; other international organizations may attend by invitation but do not have the right to vote.¹⁷ The purpose of the Conference is to determine the policy and approve the budget of FAO.¹⁸ The Conference may make recommendations to Member States and Associate Members, by a two thirds majority, related to food and agriculture for consideration with the objective to implement these recommendations by national action.¹⁹ In addition, the Conference may make recommendations to any international organization regarding issues pertaining to the FAO and may review any decision made by the council or subsidiary body and may establish Regional Conferences.²⁰ There are Regional Conferences for Africa, Asia and the Pacific, Europe, Latin America and the Caribbean, and Near East and North Africa.²¹ These are the highest governing body of FAO at the regional level and their purpose is to be a forum for Member States from the same geographic region to meet and discuss regional priorities, challenges, and to formulate coherent and aligned positions on global policy.²²

The Council of FAO is the executive body of the organization and meets between the biennial FAO Conference years.²³ The council acts on current food and agricultural activities and situations, and activities of the organization of the whole, including the development of the Programme of Work.²⁴ The Council's powers are delegated by the Conference and various subcommittees, for example the Programme Committee and the Finance Committee, assist its work.²⁵ A body of 49 Member Nations is elected to serve three-year terms on the Governing Council.²⁶

The Director-General leads FAO and is appointed by the Conference for an initial four-year term that can be renewed once, for a total tenure of eight years.²⁷ The current Director-General is José Graziano da Silva, who was re-elected in 2015 to serve his second and final term.²⁸ The organization is composed of six main departments: Agriculture and Consumer Protection; Economic and Social Development; Fisheries and Aquaculture; Forestry; Corporate Services, Human Resources and Finance; and, Technical Cooperation.²⁹ Specialized divisions further support these departments.³⁰ For example, the Agricultural Development Economics Division supports the Economic and Social Development Department through preparing evidence-based policy analysis on agriculture and economic development.³¹

Funding for FAO is derived from various sources, with the majority of the funding coming from obligatory, assessed contributions by Member States, as well as voluntary contributions by Member States.³² The current 2016-2017 FAO planned budget is \$2.6 billion; 39% of its current funding comes from assessed contributions and 61% comes from voluntary contributions from Member States and other partners.³³ The amounts Member States are assessed are determined at the FAO Conference.³⁴ Further funding is provided specifically for programs and includes contributions from Member States, international financial institutions, and the private sector, with funding often directed towards specific programs.³⁵

¹⁶ FAO, *Basic Texts of the Food and Agriculture Organization of the United Nations, Volumes I and II*, 2013.

¹⁷ Ibid.

¹⁸ Ibid.

¹⁹ Ibid.

²⁰ Ibid.

²¹ FAO, *FAO Regional Conferences*, 2017.

²² Ibid.

²³ FAO, *Governing and Statutory Bodies: Council*.

²⁴ Ibid.

²⁵ FAO, *Basic Texts of the Food and Agriculture Organization of the United Nations, Volumes I and II*, 2013.

²⁶ Ibid.

²⁷ Ibid.

²⁸ FAO, *Director-General*.

²⁹ FAO, *Departments*.

³⁰ Ibid.

³¹ FAO, *Agricultural Development Economics Division (ESA)*, 2017.

³² FAO, *Technical Cooperation Department*.

³³ FAO, *About*.

³⁴ FAO, *Strategic Planning*.

³⁵ FAO, *Technical Cooperation Department*; FAO, *Strategic Planning*.

Mandate, Functions, and Powers

FAO's primary responsibilities are outlined in the *Basic Texts* of FAO that include FAO's *Constitution* (1945) and the applicable *Rules of Procedure*.³⁶ The mandate of FAO, as outlined in the preamble of the constitution, is to address the following: "raising levels of nutrition and standards of living of the peoples; improvements in the efficiency of the production and distribution of all food and agricultural products; bettering the condition of rural populations; and contributing towards an expanding world economy and ensuring humanity's freedom from hunger".³⁷ FAO is primarily responsible for increasing the level of nutrition but is not responsible for the direct provision of food.³⁸ FAO works closely with the World Food Programme (WFP) and other agencies to facilitate the provision of food, particularly in times of emergency.³⁹

The core functions of FAO, outlined in the Constitution, are to collect and analyze information related to nutrition, food and agriculture and to make this collection and analysis of data available.⁴⁰ In addition, FAO provides technical assistance to Member States, organizes programs and missions, cooperates with Member States, and takes necessary and appropriate actions to implement the mandate of the organization as set forth in the preamble.⁴¹

In addition to its core functions, FAO also provides assistance in emergencies.⁴² FAO is involved in disaster risk reduction activities to increase the resilience of communities to disasters.⁴³ Due to the relationship between food insecurity and disasters, and the further relationship to decreased levels of nutrition, FAO has implemented programs in multiple regions to reduce the risk of food insecurity through a multi-sector approach with four broad thematic pillars: "Enabling the Environment; Watch to Safeguard; Apply Risk and Vulnerability Reduction Measures; and Prepare and Respond."⁴⁴ FAO also co-leads the Food Security Cluster with WFP.⁴⁵ The cluster works to ensure that adequate nutrition and food are provided in humanitarian emergencies through the coordination of multiple partner agencies including WFP, FAO, the International Federations of Red Cross and Red Crescent Societies (IFRC), and other international NGOs.⁴⁶

Recent Sessions and Current Priorities

In the last decade, FAO has continued to promote policies aimed at food security, eradication of hunger and malnutrition, and economic development.⁴⁷ In 2004, the Council of FAO adopted the *Voluntary Guidelines to Support the Progressive Realization of the Right to Adequate Food in the Context of National Food Security (Right to Food Guidelines)* that provides Member States with practical guidance to successfully implement the goals of the *World Food Summit Plan of Action*.⁴⁸ Since, FAO has reaffirmed its commitment to eradicating hunger, and in recent years has focused on the impact of climate change on agriculture, fisheries, and forestry and promoted the adoption of adaptation and mitigation measures such as climate-smart agriculture, sustainable agriculture and fisheries practices.⁴⁹ Many of FAO's goals are integral to the *2030 Agenda for Sustainable Development* (2015) in order to achieve the 17 Sustainable Development Goals (SDGs) and 169 targets.⁵⁰ FAO's broad goals of the 2030 Agenda are: end poverty, hunger and malnutrition; sustainable development in agriculture, fisheries, and forestry;

³⁶ FAO, *Basic Texts of the Food and Agriculture Organization of the United Nations, Volumes I and II*, 2013, p. 3.

³⁷ Ibid.

³⁸ UNEP, *United Nations Specialized Agencies versus United Nations Programmes*, 2010.

³⁹ FAO, *FAO Attributes, Core Functions, and Comparative Advantages*.

⁴⁰ FAO, *Basic Texts of the Food and Agriculture Organization of the United Nations, Volumes I and II*, 2013, p. 3.

⁴¹ FAO, *FAO Attributes, Core Functions, and Comparative Advantages*.

⁴² FAO, *FAO in Emergencies: Resilience*.

⁴³ Ibid.

⁴⁴ FAO, *Resilient Livelihoods: Disaster Risk Reduction for Food and Nutrition Security*, 2013; FAO, *A Field Guide to Disaster Risk Reduction in Southern Africa*, 2014.

⁴⁵ Humanitarian Response, *Humanitarian Response: About*.

⁴⁶ Food Security Cluster, *About FSC*.

⁴⁷ FAO, *About FAO*, 2017.

⁴⁸ FAO, *Voluntary Guidelines to support the progressive realization of the right to adequate food in the context of national food security*, 2005, p. iii.

⁴⁹ FAO, *About FAO*, 2017.

⁵⁰ FAO, *Sustainable Development Goals*, 2017.

and, combat and adapt to climate change.⁵¹ These broader SDGs mean that FAO's work towards the successful realization of the 2030 Agenda will touch all of the 17 SDGs in significant capacity.⁵²

FAO's current priorities focus around the implementation and monitoring of the success of the SDGs.⁵³ FAO is the custodian of 21 indicators across SDGs 2, 5, 6, 12, 14 and 15.⁵⁴ As a custodian agency FAO is responsible for collecting, analyzing, verifying, and distributing data from Member States and tracking global and regional estimates; contributing to SDG reports that are component of the High-Level Political Forum on Sustainable Development's review; and establishing partnerships with other international agencies to monitor and report on the indicators.⁵⁵ To achieve these goals, FAO is expanding its data collection and analysis through expanding its access to technologies such as, partnerships with companies like Google to access geospatial archives and harnessing satellite technology to monitor fisheries.⁵⁶

The 40th Session of the FAO Conference was held from 3 July to 8 July 2017 and Member States discussed and reviewed the work of FAO on the SDGs and its programmatic work.⁵⁷ In addition, the conference adopted the 2018-2019 Biennial Theme, which is "Climate Change and its impact on the work and activities of FAO."⁵⁸ The 2017 Programme Evaluation Report found that most of FAO's alignment of its programs to national and regional and global priorities, satisfactory or highly satisfactory through strengthening the Organization's ability to work closely with stakeholders to achieve favorable outcomes.⁵⁹ FAO's programs aimed at food security, nutrition, forestry's, fisheries, were among its best performing which was determined by FAO's ability to realize stated program outcomes.⁶⁰ FAO indicated its continued work towards aligning its strategic objective and climate change through the adoption of the 2018-2019 Biennial Theme, "Climate Change and its impact on the work and activities of FAO."⁶¹ The primary goal of FAO in this context is to improve Member States' food and agriculture systems to be resilient to the effects of global climate change.⁶²

Additionally, the *Director-General's Medium Term Plan 2018-2021* (MTP) and *Programme of Work and Budget 2018-2019* (PWB) build upon the organization's work towards the achievement of the 2030 Agenda and more broadly food security and sustainability.⁶³ The PWB's assessment showed that FAO's strategic objectives contribute to 40 targets of 15 of the SDGs.⁶⁴ The MTP sets out the five strategic objectives of FAO which are: eradication of malnutrition and hunger; increase the productivity and sustainability of agriculture, forestry, and fisheries; reduce rural poverty; improve the inclusiveness and efficiency agriculture and food systems; and, increase the resilience of livelihoods to threats and crises.⁶⁵ The PWB outlines the program's priorities and outcomes and the allocation of FAO's resources to achieving its strategic objectives.⁶⁶

Conclusion

FAO will play a crucial role in meeting the targets of the 2030 Agenda as its strategic objectives and programmatic work will intersect with nearly every SDG in some capacity.⁶⁷ FAO, along with its partner organizations, is in a position to further reduce the burden of hunger, malnutrition, and food insecurity on future generations and have

⁵¹ FAO, *Sustainable Development Goals*, 2017.

⁵² Ibid.

⁵³ FAO, *FAO and the SDGs*, 2015.

⁵⁴ Ibid.

⁵⁵ Ibid.

⁵⁶ Ibid.

⁵⁷ FAO, *FAO Conference ends with endorsement of UN agency's programme of work and budget*, 2017.

⁵⁸ Ibid.

⁵⁹ FAO, *Programme Evaluation Report 2017*, 2017, pp. 4-5.

⁶⁰ Ibid., p. 4.

⁶¹ FAO, *Fortieth Session: 2018-19 Biennial Theme - Climate Change and its impact on the work and activities of FAO*, 2017.

⁶² Ibid.

⁶³ FAO, *The Director-General's Medium Term Plan 2018-21 and Programme of Work and Budget 2018-19*, 2017.

⁶⁴ Ibid.

⁶⁵ Ibid., p. 5.

⁶⁶ Ibid.

⁶⁷ FAO, *FAO and the SDGs*, 2015.

aligned its strategic objective towards achieving these goals.⁶⁸ Through organization-wide activities FAO will further enhance its position to appropriately respond to pressing situations, such as famine and food insecurity, while still meeting the outlined goals to eradicate hunger, malnutrition, and combat poverty.⁶⁹

Annotated Bibliography

Food and Agriculture Organization of the United Nations. (2013). *Basic Texts of the Food and Agriculture Organization of the United Nations, Volumes I and II*. Retrieved 10 July 2014 from: <http://www.fao.org/docrep/meeting/022/k8024e.pdf>

The Basic Texts of FAO include the mandate, the constitution, and an overview of the governing bodies. Delegates should use these documents as a base for further research and ensure actions recommended fit within the mandate of the organization. In order to propose policy that is within the scope and mandate of FAO, delegates need to have a keen understanding of FAO's powers, authority, and ability to implement policy and programmatic activities.

Food and Agriculture Organization of the United Nations. (2015). *FAO and the SDGs* [Report]. Retrieved 20 August 2017 from: <http://www.fao.org/3/a-i6919e.pdf>

This report discusses the ways in which FAO will work towards achieving the SDGs and the means to evaluate its, and other organizations' progress towards achieving several of the SDGs and its targets. It provides valuable insight into how FAO will ensure that the relevant information is collected in order to inform and adapt its future programmatic work in response to trends observed. It is important for delegates to understand the work that FAO does in order to track its progress so that they can make informed decisions about future policy proposals.

Food and Agriculture Organization of the United Nations. (2017). *Programme Evaluation Report 2017* [Report]. Retrieved 17 July 2017 from: <http://www.fao.org/3/a-mt142e.pdf>

The Programme Evaluation Report covers the work of FAO during the years 2015 and 2016 and highlights successes and remaining challenges of FAO's work in achieving its previous goals. It is important for delegates to understand the areas in which FAO excels in achieving its goals and strategic objectives in order to incorporate these strengths into new policies. Therefore it is also important to understand where FAO did fulfill its goals in order to propose new ways in which the committee may approach solutions to the issues that the FAO is working to resolve.

Food and Agriculture Organization of the United Nations. (2017). *The Director-General's Medium Term Plan 2018-21 and Programme of Work and Budget 2018-19*. Retrieved 17 July 2017 from: <http://www.fao.org/3/a-ms278e.pdf>

The Medium Term Plan 2018-2021 (MTP) outlines the current priorities and immediate work of FAO. The MTP identifies ten challenges to achieving FAO's goal and priorities and determined five strategic objectives: "Contribute to the eradication of hunger, food insecurity and malnutrition; Make agriculture, forestry and fisheries more productive and sustainable; Reduce rural poverty; Enable more inclusive and efficient agricultural and food systems; and, Increase the resilience of livelihoods to threats and crises". It is crucial for delegates to understand the ten challenges to achieving not only the strategic objectives of FAO but furthermore how the challenges may impede any work of the organization. In addition, knowledge of the strategic objectives of FAO is important in order for delegates to propose actionable policy that is aligned with the committee's current priorities.

Food and Agriculture Organization of the United Nations. (n.d). *FAO Attributes, Core Functions, and Comparative Advantages*. Retrieved 10 August 2014 from: <http://www.fao.org/docrep/meeting/025/md881e01.pdf>

This document clearly outlines the core functions of FAO and how they, as outlined in FAO's constitution, contribute to the success of the organization. In addition, it outlines the evolution of how these core functions have been explained and incorporated in previous decisions. It is

⁶⁸ Ibid.

⁶⁹ Ibid.

imperative that delegates have a strong foundational knowledge of the mandate and the functions of FAO in order to propose policy that is actionable.

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I. Growing Greener Cities through Urban Agriculture

“Let us create ‘Green Cities’ where people can raise their children and pursue their dreams in a healthy environment.”⁷⁰

Introduction

In 2016, the city of Chicago was heralded as the leader of urban agriculture in the United States.⁷¹ A city-wide mapping project found that Chicago was host to 250,000 home gardens and 1,500 large community gardens.⁷² In fact, Chicago’s O’Hare International Airport is home to an aeroponic, indoor garden that grows approximately 1,100 plants.⁷³ Chicago’s robust urban agriculture and green cities programs have been helping the city not only to create jobs, but to invest in more efficient local governance to implement environmentally friendly policies.⁷⁴ In the literature of urban agriculture, organizations discuss utilizing both urban and peri-urban agriculture due to the need for small and medium-size enterprises within the urban context.⁷⁵ Urban agriculture is the growing of plants or the raising of animals within cities, while peri-urban agriculture is similar, but it is located around the periphery of cities and tends to be applied by mid-size enterprises.⁷⁶ Furthermore, both urban farming methods materialize through garden-based activities, livestock rearing, agroforestry, and aquaculture.⁷⁷ The Food and Agriculture Organization (FAO) of the United Nations (UN) began promoting urban agriculture at the beginning of the 21st century through the Millennium Development Goals (MDGs), and as a part of its Special Programme for Food and Security.⁷⁸ According to FAO, the concept of greener cities is designed to promote “resilience, self-reliance, as well as social, economic, and environmental sustainability.”⁷⁹

Altogether, FAO has championed urban agriculture and green cities, which are cities that have integrated eco-architecture and urban agriculture, due to the overwhelming growth of urban populations.⁸⁰ In its 2008 report, *Food for Cities*, FAO stated that by 2030, 60% of the world’s population, and by 2025, 3.2 billion people in the developing world, will live in urban centers, while still most food production will generate from rural areas.⁸¹ According to UN Secretary-General António Guterres’ statement at the High-Level Political Forum on Sustainable Development in 2017, rural-to-urban migration is still a prevalent “megatrend” that is curtailing development and sustainability due to vast overcrowding and limited economic mobility.⁸² FAO projects that nearly 6.9 billion people will live in urban areas by 2050, with vastly less rural agricultural producers and productive land to sustain those cities.⁸³ Moreover, according to the International Food Policy Research Institute’s (IFPRI) 2017 *Global Food Policy Report*, urbanization is the most prevalent issue related to food security within cities across the world.⁸⁴ Additionally, 71% of people polled in the *Global Food Policy Report* believe urbanization is the greatest threat to securing adequate nutritious food for city-dwellers.⁸⁵ Environmentally, urbanization leads to numerous problems, but the most critical issue urban agriculture is facing, is the inability of cities to manage waste production and toxic emissions in the air.⁸⁶ Additionally, many people migrating to urban areas are doing so in response to extreme drought, an inability to farm, and violence.⁸⁷ Altogether, rapid rural-urban migration has strained urban resilience

⁷⁰ UN DPI, ‘Let us Create Green Cities’, *Secretary-General Says in Video Message for World Environment Day, 2 June (SG/SM/9908-ENV/DEV860-OBV/490)*, 2005.

⁷¹ Scott, How Chicago Became a Leader in Urban Agriculture, *American Inno*, 2016.

⁷² Ibid.

⁷³ Ibid.

⁷⁴ Ibid.

⁷⁵ FAO, *Food for Cities*, 2009.

⁷⁶ FAO, *Urban and peri-urban horticulture – Growing Greener Cities*, 2015.

⁷⁷ Ibid.

⁷⁸ Ibid.

⁷⁹ Ibid.

⁸⁰ FAO, *Committee on Agriculture*, 1999.

⁸¹ FAO, *Food for Cities*, 2009.

⁸² UN DPI, *Remarks to the High-Level Political Forum on Sustainable Development on 17 July 2017, in New York*, 2017.

⁸³ FAO, *Urban and peri-urban horticulture – Growing Greener Cities*, 2015.

⁸⁴ IFPRI, *Global Food Policy Report*, 2017, p. 12.

⁸⁵ Ibid.

⁸⁶ UN General Assembly, *The New Urban Agenda (A/RES/71/245)*, 2017.

⁸⁷ Ibid.

across the world, due to increased demand on local markets and poor infrastructure, such as drainage systems, waste removal, crowded housing, and public transportation.⁸⁸ However, many of those challenges can be mitigated through the benefits derived from urban agriculture.⁸⁹

International and Regional Framework

The UN has held that access to food is a human right since the *Universal Declaration of Human Rights* (UDHR) was adopted in 1948.⁹⁰ Specifically, Article 25 highlights that all people have a right to a standard of living, which includes food.⁹¹ Furthering this notion, the Committee on Economic, Social, and Cultural Rights (CESCR) and the UN Special Rapporteur on the Right to Food, expanded upon Article 25 to include that food needs to be accessible and adequate for nutrition.⁹² The 1974 World Food Conference (WFC) was the first instance in which a multilateral forum recognized that famine and malnourishment needed to end because they violated human rights.⁹³ Although its goal was to eradicate hunger in ten years, this plan subsequently failed, due to a lack of funding and inadequate government policies.⁹⁴ However, in 1996, WFC transformed into the World Food Summit, a world conference with the aim of creating concrete action plans, and later (in 2000) aiming to achieve the MDGs, specifically MDG 1, “Eradicate Extreme Hunger and Poverty.”⁹⁵ FAO officially recognized urban agriculture as a means to poverty reduction at the 1999 Committee on Agriculture (COAG).⁹⁶ COAG, a governing body of FAO, purported that urban agriculture has the ability to increase the availability of fresh food through decreased transportation time of food to cities from rural areas, increased agricultural employment and income, and efficient food waste recycling into compost.⁹⁷ In 2008, FAO reiterated the call to use urban agriculture through the release of a report titled *Urban Agriculture: For Sustainable Poverty Alleviation and Food Security*.⁹⁸ The purpose of this report was to recognize that urban agriculture was capable of helping Member States meet both MDG 1 and 7 (“Ensure Environmental Sustainability”), while mitigating many of the negative effects of urbanization.⁹⁹ Additionally, former Secretary-General Ban Ki-moon called for greater action to promote environmental sustainability and food security within urban contexts through his report “Agriculture development, food security, and nutrition” (A/69/279) of 7 August 2014.¹⁰⁰

In September 2015, the international community adopted the *2030 Agenda for Sustainable Development*, which enhances and complements the MDGs by being more comprehensive in addressing complex issues.¹⁰¹ This was accomplished by adopting 17 Sustainable Development Goals (SDGs) that address issues concerning gender equality, life on land and in water, and inclusive economic growth.¹⁰² While FAO has a stake in reaching all 17 SDGs adopted in the 2030 Agenda, the goals most applicable to urban agriculture are SDG 2: Zero Hunger; SDG 11: Sustainable Cities and Communities; and SDG 15: Life on Land.¹⁰³ In 2017, FAO released its report on *Food and Agriculture: Driving action across the 2030 Agenda for Sustainable Development*, which outlines its newest initiatives aimed at fulfilling the SDGs and calls for a “greener revolution” within the agricultural sector.¹⁰⁴ The initiatives included were: creating new partnerships among producers, sellers, and governments; leaving no one behind in the path towards development; and creating resilient community and supply systems in response to

⁸⁸ Ibid.

⁸⁹ FAO, *Urban and peri-urban horticulture – Growing Greener Cities*, 2015.

⁹⁰ UN General Assembly, *Universal Declaration of Human Rights* (A/RES/217 A (III)I), 1948.

⁹¹ Ibid, art. 25.

⁹² FAO, *About Right to Food*, 2017.

⁹³ FAO, *Monitoring Progress Since the World Food Summit – Ending hunger must be a priority for all*, 2005.

⁹⁴ Ibid.

⁹⁵ FAO, *Committee on Agriculture*, 1999.

⁹⁶ Ibid.

⁹⁷ FAO, *Urban Agriculture: For Sustainable Poverty Alleviation and Food Security*, 2008, p. 9.

⁹⁸ Ibid

⁹⁹ UN DPI, *The Sustainable Development Agenda*.

¹⁰⁰ UN General Assembly, *Report of the Secretary General: Agriculture development, food security, and nutrition* (A/69/279), 2014.

¹⁰¹ UN DPI, *The Sustainable Development Agenda*.

¹⁰² Ibid.

¹⁰³ Ibid.

¹⁰⁴ FAO, *Food and Agriculture: Driving action across the 2030 Agenda for Sustainable Development*, 2017, p. 4.

growing severe climate events.¹⁰⁵ Likewise, in 2016, the UN Human Settlements Programme (UN-Habitat) led the effort in adopting a multilateral vision for urban development titled *The New Urban Agenda*, during the UN Conference on Housing and Sustainable Urban Development (Habitat III).¹⁰⁶ *The New Urban Agenda* was then endorsed by the General Assembly as resolution 71/235 on “Implementation of the outcome of the United Nations Conference on Housing and Sustainable Urban Development (Habitat III) and strengthening of the United Nations Human Settlements Programme (UN-Habitat)” in December 2016.¹⁰⁷ The topics covered by Habitat III were: civic engagement, financing urban development, metropolitan areas, public spaces, sustainable energy and cities, and informal settlements.¹⁰⁸ The overall goals of Habitat III are to take sizable action against environmental degradation while promoting the livelihoods and well-being of those living in deteriorating urban situations.¹⁰⁹

The General Assembly annually adopts resolutions in support of agriculture development and food security, which promote sustainable agriculture in rural and urban settings.¹¹⁰ In 2015, the General Assembly adopted resolution 70/198 on “Agricultural technology for sustainable development,” which called for the integration of technologies that can mitigate the effects of climate change, resource depletion, and urbanization.¹¹¹ The most recent resolution adopted was 71/245 on “Agriculture development, food security, and nutrition,” (2017) which calls specifically for greater investment in urban mechanisms for food production, transportation, and storage, to help provide more nutritional food to urban populations.¹¹² Regionally, the Asia-Pacific Economic Cooperation (APEC) has also recognized the importance of agricultural sustainability in both rural and urban areas through the *Piura Declaration on APEC Food Security* of September 2016.¹¹³ APEC decided that rural and urban settings can equally benefit from the derived outcomes of sustainable agricultural practices and greater rural-urban linkages.¹¹⁴

Role of the International System

FAO has forged partnerships and created programs to support urban agriculture for over a decade with its Green Cities initiative.¹¹⁵ The Green Cities initiative has a distinct approach for reaching out to vulnerable urban populations.¹¹⁶ This is done through ensuring institutional commitment from national and local governments; securing land and water rights for the urban poor; protecting the environment; ensuring stakeholder participation; and securing new markets for nutritious food.¹¹⁷ Some of the most successful programs FAO has sponsored have been in Africa and Latin America.¹¹⁸ Specifically, across five cities in the Democratic Republic of the Congo (DRC), the initiative has provided livelihoods for 20,000 urban and peri-urban growers.¹¹⁹ FAO has accomplished this through micro-credit financial support and small-scale agricultural business schemes.¹²⁰ Particularly, FAO ensures farmers have access to financial means and business workshops.¹²¹ In the last decade, Kinshasa alone produced up to 85,000 tons of vegetables, which is 65% of the city's market supply.¹²² As the program in the DRC has grown, FAO has implemented important ground work in cities to manage swiftly growing populations due to conflict and climate change.¹²³ Other programs in Bolivia and Senegal have supported micro-gardens in neighborhoods and on rooftops,

¹⁰⁵ Ibid, p. 12.

¹⁰⁶ UN General Assembly, *The New Urban Agenda (A/RES/71/256)*, 2016.

¹⁰⁷ UN General Assembly, *Implementation of the outcome of the United Nations Conference on Housing and Sustainable Urban Development (Habitat III) and strengthening of the United Nations Human Settlements Programme (UN-Habitat) (A/RES/71/235)*, 2016.

¹⁰⁸ UN General Assembly, *The New Urban Agenda (A/RES/71/256)*, 2016.

¹⁰⁹ Ibid

¹¹⁰ UN General Assembly, *Agriculture development, food security and nutrition (A/RES/71/245)*, 2017.

¹¹¹ UN General Assembly, *Agricultural technology for sustainable development (A/RES/70/198)*, 2015.

¹¹² UN General Assembly, *Agriculture development, food security and nutrition (A/RES/71/245)*, 2017.

¹¹³ APEC, *Piura Declaration on Asia Food Security*, 2016.

¹¹⁴ Ibid.

¹¹⁵ FAO, *Urban and peri-urban horticulture – Growing Greener Cities*, 2015.

¹¹⁶ Ibid

¹¹⁷ Ibid.

¹¹⁸ Ibid.

¹¹⁹ Ibid.

¹²⁰ Ibid.

¹²¹ Ibid.

¹²² Ibid.

¹²³ Ibid.

to provide fresh fruits and vegetables to surrounding communities.¹²⁴ More recently, FAO and UN-Habitat have partnered to provide support for urban agriculture programs in Central America and the Caribbean, and have found that not only is urban agriculture desired, but it is overwhelmingly improving food security within the region.¹²⁵ In sales alone, markets in the city of Havana, Cuba in 2013 sold 26,500 tons of food that was grown by urban producers.¹²⁶ These improvements are due to vast implementation of personal micro-gardens within cities, which ameliorate the financial strain of buying food and provide consistent sources of nutritious food.¹²⁷

In February 2012, FAO partnered with the Addis Ababa Urban Agriculture Core Process (AAUACP) to hold the Urban Agriculture Stakeholders' Network Creation Workshop, which included 60 stakeholders from Ethiopia as well as the international agriculture community.¹²⁸ Through this workshop, stakeholders came together to share best practices on urban agriculture, and to enhance coordination within the urban agriculture industry, particularly through local governance.¹²⁹ In support of the workshop and the AAUACP, the United Nations Environment Programme (UNEP) published *Building Urban Resilience: Assessing Urban and Peri-urban Agriculture in Addis Ababa, Ethiopia* in 2012.¹³⁰ The report states that, while urban agriculture has been a success, its accessibility and ability to improve city environmental standards is diminishing due to rapid urban growth.¹³¹ UNEP states that better city planning, with the aim of decreasing informal housing and increasing access to sustainable agricultural knowledge platforms, will greatly improve the future of urban agriculture.¹³²

Food security, urbanization, and environmental sustainability are equally important topics for regional organizations.¹³³ The European Union (EU), through its Europe 2020 innovations initiative, formed the European Innovation Partnership for Agricultural productivity and Sustainability (EIP-AGRI) in 2012.¹³⁴ EIP-AGRI is the EU's approach to promoting innovation within the agricultural industry.¹³⁵ In order to empower producers to grow more with less and to improve food supply chains across the region, EIP-AGRI plans public meetings and supports web-based functions, such as research proposals, webinars, and online industry meetings, as outlets for urban and rural farmers to share ideas and successes.¹³⁶ Additionally, through its Horizon 2020 platform, EIP-AGRI purports that urban agricultural practices are incredibly important to the EU, due the vast growth of European cities, and will benefit the region by securing food supply chains across the EU.¹³⁷ Likewise, it posits that a coalition of actors should work closely throughout research on urban projects.¹³⁸ Horizon 2020 is the largest EU initiative for research and innovation that provides funding, with few barriers, for innovations in areas that are deemed "societal challenges," such as food security and biodiversity.¹³⁹

Non-governmental organizations (NGOs), like the Research Centre for Urban Agriculture and Forestry (RUAF), an international NGO based out of the Netherlands, have partnered with regional organizations, the UN, and other NGOs to promote urban agriculture.¹⁴⁰ In 2014, through RUAF, the EU, and industry stakeholder funding, universities in Senegal, Mali, and Benin initiated the Western Africa Bio-wastes for Energy and Fertilizer (WABEF) program.¹⁴¹ WABEF is a three-year program which is expected to reduce the amount of agricultural, industrial and

¹²⁴ FAO, *Growing Greener Cities in Latin America and the Caribbean*, 2017.

¹²⁵ *Ibid.*

¹²⁶ *Ibid.*

¹²⁷ *Ibid.*

¹²⁸ Addis Ababa Urban Agriculture Core Process, *Urban Agriculture Stakeholders' Network Creation Workshop: Workshop Proceedings Addis Ababa Urban Agriculture Core Process*, 2012.

¹²⁹ *Ibid.*

¹³⁰ UNEP, *Building Urban Resilience: Assessing Urban and Peri-urban Agriculture in Addis Ababa, Ethiopia*, 2012, pp. vi-viii.

¹³¹ *Ibid.*, p. 5.

¹³² *Ibid.*, p. 1.

¹³³ APEC, *Piura Declaration on Asia Food Security*, 2016.

¹³⁴ European Commission, *About European Innovation Partnership*, 2017.

¹³⁵ *Ibid.*

¹³⁶ European Commission, *European Innovation Partnership*, 2017.

¹³⁷ European Commission, *About European Innovation Partnership*, 2017.

¹³⁸ European Commission, *Horizon 2020*, 2017.

¹³⁹ *Ibid.*

¹⁴⁰ RUAF, *About RUAF*, 2017.

¹⁴¹ *Ibid.*

municipal bio-waste and turn the waste into fertilizer and biogas for urban agriculture projects.¹⁴² RUAF produces the annual Urban Agriculture Magazine, which recounts its projects and successes; the 2017 edition will feature outcomes of WABEF and new projects RUAF will be commencing.¹⁴³ Other NGOs that have helped cities expand urban agriculture are the International Network for Urban Agriculture (INUAg) and Thailand's City Farm cooperative.¹⁴⁴ INUAg promotes urban agriculture enterprises and projects through annual awards given to programs in all regions of the world.¹⁴⁵ The 2016 winners of the INUAg awards were programs based out of Mongolia, Poland, and Trinidad and Tobago.¹⁴⁶ All winners promote biodiversity within their cities, provide fresh products at local markets, and empower marginalized communities through urban agriculture.¹⁴⁷ Lastly, the City Farm cooperative in Thailand is operated by the Sustainable Agriculture Foundation and provides spaces for small-scale producers to farm and gain technical knowledge to increase their yield.¹⁴⁸ The technical assistance varies, but much of it is focused on training members on new techniques, such as making compost and integrating environmentally friendly fertilizers into gardens.¹⁴⁹

Promoting Urban Planning and Local Governance

FAO advocates that urban planning and local governance are at the core of creating successful urban agriculture markets in cities.¹⁵⁰ Urban planning projects are capable of preparing city infrastructures and economies for future growth, efficiently using available land.¹⁵¹ However, due to rapid population growth, city governments have been unable to successfully create and implement urban planning initiatives.¹⁵² According to FAO and RUAF, urban agriculture is still greatly considered an informal economic sector, as many cities do not provide permits or land rights to recognize agricultural producers and local markets.¹⁵³ FAO provides technical support to local governments to implement proper urban planning through innovative practices on infrastructure improvements, and to adopt policies that make economic licenses more accessible to small-scale urban farmers.¹⁵⁴ For example, in the city of Cairo, Egypt, FAO has used the Greener Cities Initiative to support projects called “Green food from green roofs,” which capitalized on the available roof space to grow grains and vegetables.¹⁵⁵ Likewise, in El Alto, Bolivia, FAO has supported the municipal government through knowledge-based and technical platforms in designating 3,700 hectares for parks, gardens, and small-scale farming enterprise.¹⁵⁶ These movements towards designating green areas have been replicated throughout the world by FAO and its NGO partners in at least 20 municipalities.¹⁵⁷

Recently, RUAF has been promoting urban agriculture as a means to improve urban planning prospects during times of crisis.¹⁵⁸ RUAF, alongside its partner organizations The Spontaneous City and Lemon Tree Trust, has identified that urban agriculture has the ability to improve resilience and livelihoods within refugee camps in the Levant region and Iraq.¹⁵⁹ In Kurdish Iraq, the Domiz Camp is seen as a landmark success for the greening of refugee camps, which has been achieved through initiatives that prioritized community building, such as regular gardening competitions that highlight the importance of gardening in camps, and provide a cash prize to winners.¹⁶⁰ Since the initial gardening competition in April 2016, refugees in Domiz have been able to create economic activity, become

¹⁴² Ibid.

¹⁴³ RUAF, *Urban Agriculture Magazine*, 2017.

¹⁴⁴ INUAg, *INUAG*, 2017.

¹⁴⁵ Ibid.

¹⁴⁶ Ibid.

¹⁴⁷ Ibid.

¹⁴⁸ Tanworamongkon & Middleton, Inspiring the urban farming movement in Bangkok, *Mekong Commons*, 2014.

¹⁴⁹ Ibid.

¹⁵⁰ FAO, *Greener Cities: Good Governance*, 2015.

¹⁵¹ Ibid.

¹⁵² Ibid.

¹⁵³ RUAF, *About RUAF*, 2017.

¹⁵⁴ FAO, *Greener Cities: Good Governance*, 2015.

¹⁵⁵ Ibid.

¹⁵⁶ Ibid.

¹⁵⁷ Ibid.

¹⁵⁸ Borra, B., et al., *Linking Urban Farming and Urban Planning in Times of Crisis*, 2016.

¹⁵⁹ Ibid.

¹⁶⁰ Ibid.

resilient rather than dependent, and improve the sustainable use of resources within the camp.¹⁶¹ A similar project is currently being pursued in Jordan, which has been unable to cope with the massive migration into the country.¹⁶² Particularly, the assistance RUAF provided has aided the Mafraq Governorate in the north, in coordinating with refugee farmers to create efficient irrigation plans within urban farming zones.¹⁶³ According to RUAF, the partnerships and plans that have been forged in Northern Jordan are ideal for mid- to long-term economic and community growth within the crisis-affected region.¹⁶⁴ These programs have been a great success as they are able to foster an ownership mindset, which helps refugees see the camps as a home rather than a result of the crisis.¹⁶⁵ Overall, RUAF is finding that by providing assistance to local governance, urban planning through urban agriculture in refugee centers can be successful.¹⁶⁶

Environmental Advantages of Urban Agriculture

The environmental impact of cities has increased due to rapid urbanization, with growing threats to biodiversity, natural resource availability, and healthy living.¹⁶⁷ As a result of environmental degradation and the ever-growing presence of climate change, rural-urban migration is increasingly placing greater pressure on food-supply chains and decreasing resilience in urban areas.¹⁶⁸ In order to promote the environmental advantages of urban agriculture, FAO, UNEP, and UN-Habitat work together to provide technical assistance and support for potential urban producers.¹⁶⁹

Urban agriculture has been linked to various environmental advantages, including improvements in local biodiversity, decreases in overall pollution, and increases in the recycling of organic and water resources.¹⁷⁰ In Dar es Salaam, Tanzania, UN-Habitat and FAO in 2015 promoted urban agriculture in the outskirts of the city and realized that the ecology of the area had been preserved through these agricultural spaces.¹⁷¹ In Cuba, the use of urban agriculture has entailed adopting local policies to prohibit the use of chemical fertilizers, which have been a threat to biodiversity over the last 100 years.¹⁷² Further, UNEP and FAO have found that urban agriculture is aiding cities in decreasing pollution that comes from the transportation of food.¹⁷³ In Kathmandu, Nepal, UNEP has witnessed improvements in overall air quality and temperature, as markets are selling more food from urban producers.¹⁷⁴ Additionally, FAO has proven that in Cairo, rooftop gardens decrease the temperatures of buildings by seven degrees Celsius, resulting in less consumption of electricity through traditional means of climate control, like air conditioning.¹⁷⁵ Finally, through various urban agriculture initiatives, cities have started to advocate for organic composting and greater recycling of waste to be reused as fertilizers and biogas energy for mechanical use.¹⁷⁶ UN-Habitat has promoted the use of greywater, or water resulting from household use, for irrigation systems, which has improved access of urban producers to water resources.¹⁷⁷

RUAF has found that urban agriculture can be a strong driving force for community engagement with sustainable practices that promote environmental resilience.¹⁷⁸ Particularly, RUAF has implemented programs in Sri Lanka to help urban communities improve the resilience of surrounding rice paddies and local food markets in times of serious climate events.¹⁷⁹ Rice paddies in Sri Lanka are particularly vulnerable to climate change due to their

¹⁶¹ Ibid.

¹⁶² Ibid.

¹⁶³ Ibid.

¹⁶⁴ Ibid.

¹⁶⁵ Ibid.

¹⁶⁶ Ibid.

¹⁶⁷ UNEP, *Building Urban Resilience: Assessing Urban and Peri-Urban Agriculture in Kathmandu, Nepal*, 2014, pp. vi-viii.

¹⁶⁸ Ibid.

¹⁶⁹ UN-Habitat, *Committee on Food Security, Side Event: Food for Cities Initiative*, 2012.

¹⁷⁰ FAO, *Greener Cities: Safe, clean environment*, 2015.

¹⁷¹ Ibid.

¹⁷² Ibid.

¹⁷³ UNEP, *Building Urban Resilience: Assessing Urban and Peri-urban Agriculture in Addis Ababa, Ethiopia*, 2012, p. 1.

¹⁷⁴ UNEP, *Building Urban Resilience: Assessing Urban and Peri-Urban Agriculture in Kathmandu, Nepal*, 2014, p. 1.

¹⁷⁵ FAO, *Greener Cities: Safe, clean environment*, 2015.

¹⁷⁶ UN-Habitat, *Committee on Food Security, Side Event: Food for Cities Initiative*, 2012.

¹⁷⁷ RUAF, *Promoting Urban Agriculture as a Climate Change Strategy in Kesbewa, Sri Lanka*, 2014.

¹⁷⁸ Ibid.

¹⁷⁹ Ibid.

location on coastlines that are facing rising ocean levels.¹⁸⁰ The RUAF programs focused on land mapping to promote better land use, and highlighted paddy areas that needed to implement flood prevention methods.¹⁸¹ Further, the program was two-fold and promoted micro-gardening that effectively used limited space and produced gourds, cucumbers, okra, and spices, which increased the variety of food available and decreased urban reliance on rural food production.¹⁸² Overall, the program in Sri Lanka increased local biodiversity and decreased the likelihood of the destruction of rice paddies by floods.¹⁸³

Economic Opportunities for the Urban Poor

Much of the current urban population growth has been spurred by the effects of climate change and globalization on agricultural producers in rural areas.¹⁸⁴ UNEP found that within the Kathmandu Valley, the number of rural citizens has severely depleted due to continuous low financial returns, the effects of climate change on seasonal temperatures, and land degradation from urban growth.¹⁸⁵ Thus, many farmers have abandoned their livelihoods in hopes of finding employment in Kathmandu.¹⁸⁶ The situation in Nepal is by far not unique; in fact, FAO is witnessing the same phenomenon across the developing world.¹⁸⁷ Unfortunately, the reality of rapid rural-urban migration leaves countries with decreasing food supply chains and increasing food insecurity due to less food production in rural areas.¹⁸⁸

Since FAO introduced urban agriculture as a potential solution to urban food insecurity in the early 2000s, the organization has continuously linked urban agriculture to an ability to increase economic activities and promote micro-enterprise for the urban poor.¹⁸⁹ Unfortunately, it has been primarily wealthy cities that have been able to adopt vast urban agriculture plans, while developing cities have had less success.¹⁹⁰ This lack of success is greatly due to the deficiency of land available to urban dwellers, but city and national governments have the ability to address this issue through better urban planning and policies providing economic licenses.¹⁹¹ Through successful projects in Latin America, the Caribbean, and Sub-Saharan Africa, FAO has found that urban agriculture is an ideal market for the urban poor due to its low start-up costs, potential for high yields, and relatively short production cycles.¹⁹² In a 2007 report, FAO found that nearly 350 million city-dwellers were either owners of small-scale farms or employed through urban agriculture, with many selling their products at local markets.¹⁹³ Since 2007, FAO has prioritized raising the number of city-dwellers involved in urban agriculture, especially by increasing the involvement of women.¹⁹⁴ According to FAO, women and children in urban settings are far more likely to be affected by malnutrition and food insecurity due to systemically poor family management due to patriarchal structures.¹⁹⁵ Through small-scale gardening, FAO has noticed that many women are able to keep 30% of their agricultural production for their families and sell the rest to earn income.¹⁹⁶ Specifically, in Lima, Peru, FAO's Greener Cities Initiative has ascertained that many women practicing urban agriculture have jobs outside of farming and are able to use their home garden to earn additional income.¹⁹⁷ FAO believes that gardening is seen as a therapeutic activity for women, which has positive benefits both mentally and economically.¹⁹⁸ Although research is

¹⁸⁰ Ibid.

¹⁸¹ Ibid.

¹⁸² Ibid.

¹⁸³ Ibid.

¹⁸⁴ FAO, *Greener Cities: Sustainable livelihoods*, 2015.

¹⁸⁵ UNEP, *Building Urban Resilience: Assessing Urban and Peri-Urban Agriculture in Kathmandu, Nepal*, 2014, p. 1.

¹⁸⁶ Ibid.

¹⁸⁷ Ibid.

¹⁸⁸ FAO, *Greener Cities: Sustainable livelihoods*, 2015.

¹⁸⁹ FAO, *Profitability and sustainability of urban and peri-urban agriculture*, 2007, p. 5.

¹⁹⁰ Ibid.

¹⁹¹ FAO, *Greener Cities: Sustainable livelihoods*, 2015.

¹⁹² FAO, *Profitability and sustainability of urban and peri-urban agriculture*, 2007, p. 28.

¹⁹³ Ibid.

¹⁹⁴ FAO, *The Place of Urban and Peri-Urban Agriculture (UPA) in National Food Security Programmes*, 2011, pp. ix-xii.

¹⁹⁵ FAO, *Greener Cities: Sustainable livelihoods*, 2015.

¹⁹⁶ FAO, *The Place of Urban and Peri-Urban Agriculture (UPA) in National Food Security Programmes*, 2011, pp. ix-xii.

¹⁹⁷ Ibid.

¹⁹⁸ Ibid.

still needed to fully assess the economic impacts of urban farming, FAO has witnessed through case studies in developing cities that urban agriculture is improving the livelihoods and health of the urban poor.¹⁹⁹

Conclusion

The practice of urban agriculture has greatly increased over the last decade as the realities of climate change, food insecurity, and rural-urban migration have become more evident.²⁰⁰ Unfortunately, the use of urban agriculture has mostly been seen within developed cities that are not facing rapid population growth, unlike cities in developing countries.²⁰¹ There are many reasons why Member States should promote urban agriculture policies: improvements in municipal urban planning, environmental advantages, and an overall increase in economic opportunities for the urban poor.²⁰² Urban agriculture is an effective way for cities to work towards the SDGs and improve the lives of those living in them.²⁰³ However, FAO and its partners recognize that cities face a myriad of issues when trying to implement urban agriculture programs or policies.²⁰⁴ Such issues include: lack of space available, poor infrastructure that is deteriorating even faster with greater populations, and little funding to research the implementation of urban agriculture projects.²⁰⁵ It is important for Member States and FAO to promote sustainable urban practices, as urban agriculture will be essential in addressing the multitude of challenges posed by the rapid pace of urban growth.²⁰⁶

Further Research

Since urban agriculture is still a relatively new concept in urban development and food production, there is little research available to illuminate the impacts of such programs.²⁰⁷ As delegates move forward with their research, they are encouraged to focus on gaining a better understanding of the current urban agriculture realities, particularly innovations that can be implemented internationally. Additionally, delegates should strive to answer some key questions, such as: how can FAO promote urban agriculture through multilateral channels? What innovations can entrepreneurs and municipalities implement to address urban planning concerns? How can Member States, the UN, and NGOs implement urban agriculture in times of transition, and specifically to help refugees? In what ways can Member States use global partnerships to promote greater economic growth through urban agriculture? How can FAO and its partners help municipalities address poor infrastructure? What can FAO and the UN do to increase research and data to illustrate the concrete impacts of urban agriculture?

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http://www.fao.org/fileadmin/templates/FCIT/PDF/UAW_Proceedings_Addis2012.pdf

The Addis Ababa Action Agenda was one of the most important agendas for financing development; this network meeting was a part of the Action Agenda by bringing agricultural stakeholders to the forefront. Particularly, the creation of this network by both FAO and the AAUACP contributes to advancing urban agriculture globally, as it provides a knowledge platform for cities interested in pursuing urban agriculture. Delegates can use this report to better understand the mechanisms that United Nations agencies use to promote and create partnerships among civil society, government, and NGO networks. Through this network, FAO used formal meetings and presentations to share knowledge of urban agriculture and establish committees to better support farmers. Further, delegates should look to this network to see how FAO and its partners build understanding and capacity for urban agriculture at a local level.

¹⁹⁹ Ibid.

²⁰⁰ UNEP, *Building Urban Resilience: Assessing Urban and Peri-Urban Agriculture in Kathmandu, Nepal*, 2014.

²⁰¹ FAO, *The Place of Urban and Peri-Urban Agriculture (UPA) in National Food Security Programmes*, 2011.

²⁰² FAO, *Growing Greener Cities in Latin America and the Caribbean*, 2017.

²⁰³ FAO, *Food and Agriculture: Driving action across the 2030 Agenda for Sustainable Development*, 2017.

²⁰⁴ Ibid.

²⁰⁵ FAO, *The Place of Urban and Peri-Urban Agriculture (UPA) in National Food Security Programmes*, 2011.

²⁰⁶ FAO, *Food and Agriculture: Driving action across the 2030 Agenda for Sustainable Development*, 2017.

²⁰⁷ FAO, *The Place of Urban and Peri-Urban Agriculture (UPA) in National Food Security Programmes*, 2011.

Asia-Pacific Economic Cooperative. (2016). *Piura Declaration on Asia Food Security* [Website]. Retrieved 20 August 2017 from: http://mddb.apec.org/Documents/2016/MM/FSMM/16_fsmm_jms.pdf

The APEC declaration on food security was an important landmark for East Asia, since the region is dealing with incredibly dense coastal populations. The Piura Declaration is one of the first regional documents to call for greater implementation of urban agriculture and city greening. Specifically, the Piura Declaration includes discussions about infrastructure investment, rural-urban development, resilient food systems, and innovations. Delegates should use this resource to understand how regions facing rapid population growth are working together to address the issues affecting urban areas. Furthermore, delegates can use this as an example of sound regional practices.

European Commission. (2017). *About EIP-AGRI* [Website]. Retrieved 20 July 2017 from: <https://ec.europa.eu/eip/agriculture/en/about>

The European Union partnership for agricultural innovation is an excellent example of cities utilizing innovative agricultural practices to address the pressure from urban growth. The EU has shown that urban agriculture can be successful even in the smallest of spaces, through innovations such as data analysis to increase production and quality of goods. Further, EIP-AGRI promotes programs that work to recycle bio-waste into energy and use water more efficiently. FAO has promoted its partnership with EIP-AGRI through collaborations with municipal leaders of EU cities, to implement innovative agricultural programs in urban areas. Delegates can use this resource as a framework for understanding how urban agriculture can be profitable with very few inputs. Additionally, delegates should use this initiative as an example of successful FAO multilateral partnerships.

Food and Agriculture Organization of the United Nations. (2007). *Profitability and sustainability of urban and peri-urban agriculture* [Report]. Retrieved 20 July 2017 from:

<http://www.ruaf.org/sites/default/files/Profitability%20and%20Sustainability.pdf>

While this document is a decade old, it provides a standard for FAO's commitment to urban agriculture, and explains its origins. One of the most important aspects of urban agriculture is its ability to spur economic growth among the urban poor, and ensuring that urban dwellers have access to nutritious food. Likewise, the report discusses the lack of research available on the overall impacts of urban agriculture and calls for greater attention to be paid to collecting relevant information. Delegates will better understand the more intricate benefits of urban agriculture after reading this report. Further, delegates can use this document to measure how FAO's approach to urban agriculture has changed over the past decade.

Food and Agriculture Organization of the United Nations. (2011). *The Place of Urban and Peri-Urban Agriculture (UPA) in National Food Security Programmes* [Report]. Retrieved 30 September 2017 from:

<http://www.fao.org/docrep/014/i2177e/i2177e00.pdf>

Within the scope of the research available on urban agriculture and the role of FAO, this is one of the most important for delegates' research. This report discusses each facet of urban agriculture and lessons learned since FAO started promoting urban programs. Delegates should strive to read this report in its entirety, as the information provided is truly imperative to this topic. Particularly, delegates should look to sections two, three, and six to gain insights into the lessons FAO has learned thus far. Delegates should utilize this report to gain a more in-depth understanding of the constraints and opportunities FAO and cities face when implementing urban agriculture programs. Additionally, delegates can use this report to find case studies about past FAO programs.

Food and Agriculture Organization of the United Nations. (2017). *Food and Agriculture: Driving action across the 2030 Agenda for Sustainable Development* [Report]. Retrieved 20 August 2017 from: <http://www.fao.org/3/a-i7454e.pdf>

This report is the culmination of FAO's work to create a long-term initiative that will aid in the achievement of the SDGs. It underscores the strategies FAO finds most important and illustrates that all 17 SDGs fit within the scope of FAO's work. Further, this document links the growing urban population issue to FAO's mission to reduce growing food insecurity in urban areas.

Delegates should read the sections on leaving no one behind, zero hunger by 2030, and changing climate impacts, as these sections are highlighted as FAO's main focus areas. Delegates should look to this document to understand FAO's current strategy regarding employment in both rural and urban agriculture, increasing food security across regions, and improving food transportation methods. In addition, delegates will find this document useful to familiarize themselves with FAO's official terminology and language concerning urban agriculture.

Food and Agriculture Organization of the United Nations. (2017). *Growing Greener Cities in Latin America and the Caribbean* [Report]. Retrieved 20 July 2017 from: <http://www.fao.org/3/a-i3696e.pdf>

This resource is one of the most recent reports produced by FAO on successful urban agriculture projects. The report highlights important themes within urban agriculture, including how it can positively impact urban planning, the environment, and provide economic opportunities. Delegates should utilize the report to identify some of the key countries where FAO is currently working on this topic, and its future plans within them. Additionally, delegates can use this source as a detailed case study to understand how urban agriculture promotes community engagement and builds resilient populations.

Food and Agriculture Organization of the United Nations & World Bank. (2008). *Urban Agriculture: For Sustainable Poverty Alleviation and Food Security* [Report]. Retrieved 20 July 2017 from: http://www.fao.org/fileadmin/templates/FCIT/PDF/UPA_-_WBpaper-Final_October_2008.pdf

Similar to the source above, this was one of the first substantial reports on urban agriculture that FAO published. This report provides an aggregate overview of past FAO programs in Sub-Saharan African and Latin America, and outlines where FAO saw urban agriculture moving in the future. Delegates should use this document to understand where FAO saw urban agriculture fitting into the context of greater development. When working in committee, it will be important for delegates to keep in mind that, currently, the UN estimates that future rural-urban migration is projected to increase the global urban population to 60% of the total world population.

United Nations General Assembly. Seventy-first session. (2016). *The New Urban Agenda (A/RES/71/256)* [Resolution]. Adopted without reference to a Main Committee (A/71/L.23). Retrieved 20 July 2017 from: <http://undocs.org/A/RES/71/256>

Urban centers are expanding in size and population density at a rapid pace, and that they will continue to grow. The Habitat III conference adopted the New Urban Agenda, which set into motion an international commitment to sound urban planning and sustainable urban practices. Habitat III provides Member States with frameworks to better plan, design, finance, and develop urban settlements. This document is useful for delegates as it provides the most current information about how the international community plans to address rapid urban growth. Delegates should specifically read all of parts A and B, as these sections discuss planning and managing urban spatial development. Delegates should use this and other UN-Habitat resources to understand how FAO works with this organization to promote food security, urban sustainability, and clean urban areas.

United Nations Environment Programme. (2014). *Building Urban Resilience: Assessing Urban and Peri-Urban Agriculture in Addis Ababa, Ethiopia* [Report]. Retrieved 20 July 2017 from: http://wedocs.unep.org/bitstream/handle/20.500.11822/9430/-Building_Urban_Resilience_Assessing_Urban_and_Peri-urban_Agriculture_in_Addis_Ababa-2014.pdf?sequence=3&isAllowed=y

The United Nations Environment Programme has recognized that growing urban populations increase food insecurity and environmental degradation. This report details how urban agriculture can promote urban resilience and preparedness for potential food shortages. Delegates should look to this source as a concrete example of a UN program that is successfully promoting urban agriculture in one of the poorest cities in the world. Particularly, this program has been very successful due to its early recognition of external issues with urban agriculture, and through its inclusion of local governance. Further, delegates can gain an even greater understanding of how different agencies within the UN system can collaborate with each other to achieve sustainable urban agricultural development.

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II. Promoting Sustainable Agricultural Practices

*“The world’s landscape is changing and we cannot rely on our past successes for future gains.”*²⁰⁸

Introduction

Agriculture is fundamental to human activity, providing the nutrition necessary for human survival and good health.²⁰⁹ In the 20th century, the global population rose from 1.6 to over six billion; this increase required increased agricultural output driven, in part, by the use of fertilizers and pesticides.²¹⁰ By 2050, the global population is estimated to grow to approximately 9.7 billion people, necessitating agricultural production to increase by 60% worldwide.²¹¹ The largest increases in population will occur in developing countries, which will need to double their food output to meet future demand.²¹² Additionally, climate change will cause extreme weather events, including droughts and heat waves, and impact how much crop is produced per unit of land, or yield.²¹³ In the near future, agriculture must be capable of feeding a larger population in spite of these and other challenges.²¹⁴

The high-input method of the 20th century results in lower agricultural yields, due to environmental degradation, putting the ability of future generations to feed themselves at risk.²¹⁵ In addition, agriculture contributes to climate change, generating 21% of greenhouse emissions, resulting in the moderate to severe degradation of one third of global soil, and contributing to a loss of biodiversity.²¹⁶ Furthermore, agriculture has failed to be inclusive with respect to the income of farmers; three quarters of the world’s poorest people, totaling 810 million people, depend on agriculture for their livelihoods.²¹⁷ The United Nations (UN) World Commission on Environment and Development (WECD) report *Our Common Future* (1987) defines sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”²¹⁸ Definitions of sustainable agriculture vary; one definition is, agriculture that makes use of practices that consider its impact on animals, soil and crops.²¹⁹ This definition also states that sustainable agriculture should use as few environmentally harmful inputs as possible, and should utilize techniques and processes which are adapted to the local environment.²²⁰

The concept of sustainable development is comprised of three parts, as determined at the 2005 World Summit: economic, environmental, and social.²²¹ This guide will follow this structure, beginning with a look at the economic challenges of promoting sustainable agricultural practices and reducing food waste.²²² Secondly, this topic will look at how best to continue increasing output without further harming the environment, and how to adapt agriculture to

²⁰⁸ FAO, *Strategic Work of FAO for Sustainable Agriculture*, 2017, p. 10.

²⁰⁹ FAO, *The Future of Food and Agriculture: Trends and Challenges*, 2017, p. 4.

²¹⁰ UN DESA, Population Division, *The World at Six Billion*, 1999; FAO, *Strategic Work of FAO for Sustainable Agriculture*, 2017, p. 4; FAO, *Speech by FAO Director-General José Graziano da Silva to the Agriculture Committee of the European Parliament on 30 May 2017, in Brussels*, 2017; University of California Agricultural Sustainability Institute, *What is sustainable agriculture?*.

²¹¹ FAO, *Soil is a non-renewable resource*, 2015.

²¹² *Ibid.*

²¹³ FAO, *The State of Food and Agriculture*, 2016, p. 20.

²¹⁴ FAO, *Increasing food production without damaging the environment*, 2017; OECD, *Crop Production*. 2017.

²¹⁵ FAO, *A statement by FAO Director-General José Graziano da Silva to the Agriculture Committee of the European Parliament on 30 May 2017, in Brussels*, 2017.

²¹⁶ FAO, *The State of Food and Agriculture*, 2016, p. 2; FAO, *Soil is a non-renewable resource*, 2015.

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²¹⁸ World Commission on Environment and Development, *Our Common Future*, 1987, p. 41.

²¹⁹ Kassie & Zikhali, *Brief on Sustainable Agriculture*, 2009.

²²⁰ *Ibid.*

²²¹ UN General Assembly, *2005 World Summit Outcome (A/RES/60/1)*, 2005, p. 2.

²²² FAO, *Global food losses and food waste – Extent, causes and prevention*, 2011, pp. 1, 10-14; FAO, *Strategic work of FAO for Sustainable Food and Agriculture*, 2017, pp. 10, 16.

the consequences of climate change.²²³ Finally, the guide will examine the role sustainable agriculture can play in fighting rural poverty and malnutrition.²²⁴

International and Regional Framework

At the 1974 World Food Conference, the International Fund for Agricultural Development (IFAD) was established with the purpose of reducing poverty and hunger in rural areas through financial investments.²²⁵ The *Universal Declaration on the Eradication of Hunger and Malnutrition* (1974) was also adopted at the conference.²²⁶ This declaration acknowledges that solving world hunger does not only require greater amounts of food production, but also improvements in its distribution.²²⁷ In 1996 and 2002, FAO convened World Food Summits to incorporate the principles of sustainability into agricultural practices, as well as improving efforts on climate change mitigation and adaptation.²²⁸ The 1996 summit produced the *World Food Summit Plan of Action* (1996).²²⁹ This plan aimed to halve global rates of malnourishment by 2015 through its seven commitments.²³⁰ For example, commitment three pledged to broaden the genetic diversity of crops, and promote the use of more productive crop varieties and technologies, which can sustainably increase yields.²³¹ Commitment six focused on creating economic investment in food security and rural development, through measures such as micro-credit for rural smallholders, particularly for women.²³² The 2002 World Food Summit was responsible for the creation of an Intergovernmental Working Group, consisting of various stakeholders.²³³ The group created the *Voluntary Guidelines on the Progressive Realization of the Right to Adequate Food in the Context of National Food Security* (2004), better known as the Right to Food guidelines.²³⁴ This document contains eight guidelines that outline how to ensure that everyone has adequate access to food.²³⁵ Guideline 2.6 contains measures to address poverty and hunger through rural and agricultural development.²³⁶ Guideline 8 notes the importance of allowing access to land, water and technology, particularly for traditionally disadvantaged groups.²³⁷

Sustainable agriculture is integral to fulfilling the aims set forth in the Millennium Development Goals (MDGs) and their successors, the Sustainable Development Goals (SDGs).²³⁸ While the MDGs helped to reduce poverty, targets with regards to environmental degradation, gender, and wealth inequalities did not fully meet their objectives.²³⁹ The *2030 Agenda for Sustainable Development* (2015) and the SDGs build upon the efforts of their predecessors, while bringing a renewed focus to issues which were not key aspects of the MDGs.²⁴⁰ Many of the SDGs are relevant to

²²³ FAO, *Save and Grow*, 2011, pp. 67-70; FAO, “*Climate-Smart*” *Agriculture*, 2010, p. 2.

²²⁴ FAO, *FAO’s Strategic Objective 3: reduce rural poverty*, 2014, pp. 1-2; FAO, *The Future of Food and Agriculture: Trends and Challenges*, 2017, p. 80.

²²⁵ Commission of European Communities, *Communication from the Commission to the Council*, 1974, p. 1; IFAD, *IFAD at a glance*, 2017, pp. 1-2.

²²⁶ *Ibid.*

²²⁷ World Food Conference, *Universal Declaration on the Eradication of Hunger and Malnutrition*, 1974.

²²⁸ FAO, *Rome Declaration and the World Food Summit Plan of Action*, 1996, p. 1; FAO, *Voluntary Guidelines on the Progressive Realization of the Right to Adequate Food in the Context of National Food Security*, 2004, p. iii; FAO, *Declaration of the World Summit on Food Security*, 2009, p. 1.

²²⁹ FAO, *Rome Declaration and the World Food Summit Plan of Action*, 1996.

²³⁰ FAO, *Implementation of the World Food Summit Plan of Action*.

²³¹ FAO, *Rome Declaration and the World Food Summit Plan of Action*, 1996, pp. 11-15.

²³² *Ibid.*, pp. 23-25.

²³³ FAO, *Voluntary Guidelines on the Progressive Realization of the Right to Adequate Food in the Context of National Food Security*, 2004, pp. iii-iv.

²³⁴ FAO, *Rome Declaration and the World Food Summit Plan of Action*, 1996; FAO, *The World Food Summit and its Follow up*, 1999; FAO, *Voluntary Guidelines on the Progressive Realization of the Right to Adequate Food in the Context of National Food Security*, 2004, pp. iii-iv.

²³⁵ *Ibid.*

²³⁶ FAO, *Voluntary Guidelines on the Progressive Realization of the Right to Adequate Food in the Context of National Food Security*, 2004, p. 10.

²³⁷ *Ibid.*, p. 16.

²³⁸ FAO, *Millennium Development Goals*, 2017; FAO, *Strategic work of FAO for Sustainable Food and Agriculture*, 2017, p. 28.

²³⁹ UN DESA, *The Millennium Development Goals Report*, 2015, pp. 8-9; OECD, *OECD Contribution to the United Nations Commission on Sustainable Development 16*, 2008, pp. 17-19; World Bank Group, *Who Are the Poor in the Developing World?*, 2012, p. 21.

²⁴⁰ UN System Task Team on the Post 2015 UN Development Agenda, *Realizing the Future We Want for All*, 2012, p. 9.

sustainable agriculture, including, but not limited to: eradicating poverty (SDG 1), eliminating hunger and promoting sustainable agriculture (SDG 2), mitigating and adapting to climate change (SDG 13), promoting sustainable production and consumption patterns (SDG 12), and protecting life on land (SDG 15).²⁴¹ Importantly, each SDG has several comprehensible targets that enable clear assessment of achievement.²⁴²

In 2014, FAO organized the Second International Conference on Nutrition, in cooperation with the World Health Organization (WHO).²⁴³ This conference resulted in the *Rome Declaration on Nutrition* (2014).²⁴⁴ The declaration acknowledged that food systems are currently straining to provide food that is nutritious and diverse enough to meet global requirements due to environmental degradation, lack of resources, food losses, and unsustainable consumption and production patterns.²⁴⁵ In 2015, the *Paris Agreement* was adopted by 191 UN Member States, and committed them to limiting their carbon emissions in order to ensure that global temperatures do not rise by more than two degrees Celsius.²⁴⁶ The agreement also acknowledges the importance of protecting food systems through climate change mitigation and adaptation.²⁴⁷

Role of the International System

In addition to the existing international documents, FAO and other organizations have implemented concrete actions and programs to promote sustainable agriculture.²⁴⁸ One such collaboration is the joint FAO and WHO Codex Alimentarius, which ensures food health standards, and facilitates trade in agricultural products between Member States.²⁴⁹ Facilitating trade helps to enhance food security in Member States unable to produce enough of their own food; furthermore, it provides necessary investment to make agricultural systems more sustainable and resilient to climate change.²⁵⁰ FAO further engages in cooperation with Civil Society Organizations (CSOs) around the world, including non-governmental organizations (NGOs).²⁵¹ CSOs benefit from the expertise and global reach of FAO, while FAO benefits from working with partners with local knowledge and an ability to reach areas often overlooked or inaccessible to international organizations.²⁵² For example, FAO has cooperated with Catholic Relief Services (CRS) to help over 255,000 Malawian farmers recover from two years of floods followed by devastating drought.²⁵³ FAO and CRS organized seed fairs, which allowed farmers access to the best-suited seed varieties for their environment.²⁵⁴ Using these varieties enabled them to produce larger yields while maintaining greater environmental protection.²⁵⁵ Likewise, FAO works closely with the private sector in line with the standards and guidelines established by the UN Global Compact, a voluntary UN initiative established by the UN General Assembly in 2000 that encourages businesses to integrate principles of sustainability into their everyday practices.²⁵⁶ The UN Global Compact established six agricultural business principles ranging from environmental protection to sharing best practices and technology.²⁵⁷ In this sense, FAO cooperates with agricultural businesses, such as the Kuehne Foundation, combining knowledge and expertise to help them transition towards sustainable agricultural practices.²⁵⁸

²⁴¹ UN General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015.

²⁴² UN System Task Team on the Post 2015 UN Development Agenda, *Realizing the Future We Want for All*, 2012, p. 37.

²⁴³ FAO & WHO, *Conference Outcome Document: Rome Declaration on Nutrition*, 2014, p. 1.

²⁴⁴ *Ibid.*, p. 1.

²⁴⁵ *Ibid.*, p. 2.

²⁴⁶ FAO, *Breakthrough climate agreement recognizes food security as a priority*, 2015.

²⁴⁷ *Ibid.*

²⁴⁸ FAO, *FAO Strategy for partnerships with Civil Society Organizations*, 2013, p. 1.

²⁴⁹ WHO, *International food standards (Codex Alimentarius)*, 2017; FAO & WHO, *Understanding the Codex Alimentarius*, 2006, pp. 1-4.

²⁵⁰ FAO, *Rome Declaration and the World Food Summit Plan of Action*, 1996, p. 18.

²⁵¹ FAO, *FAO Strategy for partnerships with Civil Society Organizations*, 2013, p. 1.

²⁵² *Ibid.*, p. 21.

²⁵³ FAO, *Taking Malawi farmers a step closer to recovery*, 2017.

²⁵⁴ *Ibid.*

²⁵⁵ *Ibid.*

²⁵⁶ FAO, *FAO Strategy for partnerships with the private sector*, 2013, p. 21; Respect Austria, *UN Global Compact: the history of the Global Compact*, 2006.

²⁵⁷ UN Global Compact Office, *Food and Agriculture Business Principles*, 2014.

²⁵⁸ FAO, *How does FAO partner with the private sector?*, 2017; FAO, "FAO's approach is clearly a sign of an open-minded culture" Says Kuehne Foundation Managing Director, 2015.

FAO leverages the expertise of its regional and sub-regional offices to assist Member States in developing sustainable agricultural practices that take into account their unique needs, and to use methods that are appropriate for their environment.²⁵⁹ FAO has, for instance, worked closely with the European Union (EU) and the Sri Lankan government to assist farmers in bringing an area of abandoned farmland, approximately the size of Manhattan, back to productive use.²⁶⁰ This was done by repairing 54 irrigation tanks, which had fallen into disrepair, and by clearing and levelling overgrown terrain.²⁶¹ Furthermore, 11,000 farmers were given assistance in sustainable and ecologically sound crop production.²⁶² In doing so, this project has helped to provide employment to those families seeking to recover from conflict, and to improve their food security situation, while protecting the environment through water conservation.²⁶³ In July 2017, FAO held its 40th annual conference, which was attended by representatives from 181 Member States.²⁶⁴ The conference discussed FAO's future priorities and resulted in the endorsement of the 2018-2019 biennial theme, "Climate Change and its impact on the work and activities of FAO."²⁶⁵ Making climate change the theme of this conference signals the importance of climate change mitigation and adaptation for FAO.²⁶⁶

Economic Factors of Sustainable Agriculture – Doing More With Less

Promoting research and implementation of sustainable farming methods

FAO uses farmer field schools (FFS) to help farmers transition to sustainable agricultural practices.²⁶⁷ Since their inception in the 1980s, FFSs have expanded to over 90 Member States across the world, giving farmers the opportunity to benefit from the skills and experiences of others through peer learning.²⁶⁸ FFS activities are hands-on, covering the production cycle of a particular crop from plantation to seed production.²⁶⁹ For example, in Kenya, farmers were given guidance on which varieties of maize were most resilient to disease, helping to reduce losses and to increase profitability.²⁷⁰ Applying these principles increases the resilience and profitability of farming, while taking into account the specific environmental conditions necessary for success.²⁷¹ A further innovation in assisting farmers is FAO's Technologies and Practices for Small Agricultural Producers (TECA) portal.²⁷² TECA is a free database containing a multitude of sustainable agricultural practices, many of which result in increased agricultural yields or greater resilience to pests, diseases, and climate change.²⁷³ It also helps farmers to encourage pollination of their crops through a beekeeping exchange group.²⁷⁴

Reducing waste

Each year, approximately one out of every three metric tons of food produced for human consumption is wasted or lost; this loss of food and represents an unsustainable loss of resources.²⁷⁵ On the one hand, a large amount of edible food is thrown away at the retail and consumer stages due to high appearance standards in developed countries.²⁷⁶ In developing countries, on the other hand, most of the losses occur at an earlier stage, mainly due to issues related to preservation and storage.²⁷⁷ Reducing waste will help farmers produce enough harvest to sell and make a profit,

²⁵⁹ FAO, *Worldwide offices*, 2010.

²⁶⁰ FAO, *Stories from the field: Rural Sri Lanka farm families grow more crops*, 2013, pp. 1-2; The Physics Factbook, *Area of Manhattan*.

²⁶¹ *Ibid.*

²⁶² *Ibid.*

²⁶³ *Ibid.*

²⁶⁴ FAO, *FAO Conference ends with endorsement of UN agency's programme of work and budget*, 2017.

²⁶⁵ *Ibid.*

²⁶⁶ *Ibid.*

²⁶⁷ FAO, *Farmer Field School Guidance Document*, 2016, p. v.

²⁶⁸ FAO, *Strategic work of FAO for Sustainable Food and Agriculture*, 2017, pp. 10, 16.

²⁶⁹ FAO, *Farmer Field School Guidance Document*, 2016, pp. vi, 16.

²⁷⁰ *Ibid.*

²⁷¹ *Ibid.*, p. vi.

²⁷² FAO, *Strategic work of FAO for Sustainable Food and Agriculture*, 2017, p. 10; FAO, *Beekeeping Exchange Group*, 2017; FAO, *TECA*, 2017.

²⁷³ *Ibid.*

²⁷⁴ *Ibid.*

²⁷⁵ FAO, *Towards the future we want*, 2012, p. 8.

²⁷⁶ FAO, *Global food losses and food waste – Extent, causes and prevention*, 2011, pp. 1, 10-14.

²⁷⁷ *Ibid.*

enabling them to enjoy a decent standard of living and to further invest in agricultural production methods.²⁷⁸ FAO combats food waste through the Save Food initiative, which raises awareness through annual Save Food congresses, promoting collaboration between stakeholders in the food industry, including governments and private businesses.²⁷⁹

Environmental Factors of Sustainable Agriculture – Keeping Agriculture and the Environment in Harmony

A healthy environment is a basic human right, and is essential to ensuring long-term agricultural output.²⁸⁰ The UN Environment Programme (UNEP) estimates that environmental degradation, water scarcity, and a greater incidence of pests may reduce agricultural yields by as much as 25% by 2050, endangering the commitments made in the SDGs, and condemning a large part of the global population to food insecurity.²⁸¹

Sustainable Intensification

FAO estimates that it will be necessary to limit the amount of new land used for agriculture in the future, to protect the earth’s ecosystems.²⁸² Therefore, 90% of increased crop production between now and 2050 will have to come from land already under cultivation.²⁸³ Sustainable intensification is defined as increasing agricultural yield from an area of land without environmental impacts.²⁸⁴ Sustainable intensification can ensure that demand for food is met without bringing large amounts of land into cultivation.²⁸⁵ FAO helps smallholders engage in sustainable intensification through the Save and Grow initiative.²⁸⁶ Fertilizers can help maintain agricultural productivity; however, using fertilizers on a large scale can result in the pollution of the surrounding environment.²⁸⁷ Developing and distributing new breeds of crops, which need less fertilizer, will help to reduce pollution and protect the environment.²⁸⁸ Pests, diseases, and weeds are traditionally managed through large amounts of pesticides, many varieties of which are detrimental to the health of farmers, animals and consumers.²⁸⁹ For example, the pesticides diazinon, glyphosate, and malathion were classified by WHO in 2016 as having a risk of causing cancer.²⁹⁰ FAO suggests the use of Integrated Pest Management (IPM) to keep losses to an acceptable level, while reducing or eliminating altogether the use of potentially harmful pesticides.²⁹¹ IPM is based on the idea that the best defense against pests and diseases is a healthy agro-ecosystem.²⁹² Such an ecosystem will protect predators, allowing them to keep pest numbers low, while crop rotations can limit the spread and extent of insect infestation, reducing the need for insecticides.²⁹³

Adaptation to a changing climate

The agricultural sector is the most vulnerable to climate change, due to reduced yields, unpredictable weather patterns and a higher rate of infectious diseases.²⁹⁴ This threatens the livelihood of farmers, increases food price volatility, and causes food insecurity.²⁹⁵ Moreover, these detrimental consequences are concentrated in regions of the world that are already the most food insecure, such as Sub-Saharan Africa and South Asia.²⁹⁶ Climate-smart agriculture (CSA) offers a way for agriculture to adapt to these circumstances.²⁹⁷ CSA consists of different

²⁷⁸ Ibid., p. 1.

²⁷⁹ FAO, *SAVE FOOD: Global Initiative on Food Loss and Waste Reduction*, 2017.

²⁸⁰ United Nations Conference on the Human Environment, *Report of the United Nations Conference on the Human Environment (A/CONF.48/14/Rev.1)*, 1972; FAO, *Save and Grow*, 2011, p. 5.

²⁸¹ UNEP, *The Environmental Food Crisis*, 2009, p. 5.

²⁸² FAO, *How to feed the world in 2050*, 2009, pp. 9-10.

²⁸³ Ibid.

²⁸⁴ FAO, *Save and Grow*, 2011, p. 9.

²⁸⁵ Ibid.

²⁸⁶ FAO, *Save and Grow*, 2011, pp. iii-iv.

²⁸⁷ Ibid., p. viii.

²⁸⁸ Ibid., p. 42.

²⁸⁹ Ibid., p. xi.

²⁹⁰ Ibid., WHO, *Food Safety: Frequently asked questions*, 2017.

²⁹¹ Ibid., pp. 67-70.

²⁹² Ibid., pp. 67-70.

²⁹³ Ibid., pp. 67-70.

²⁹⁴ FAO, *A statement by FAO Director-General José Graziano da Silva to the Agriculture Committee of the European Parliament on 30 May 2017, in Brussels*, 2017; FAO, *The State of Food and Agriculture*, 2016, p. 8.

²⁹⁵ FAO, *The State of Food and Agriculture*, 2016, p. 8.

²⁹⁶ Ibid.

²⁹⁷ FAO, *“Climate-Smart” Agriculture*, 2010, p. 2.

methodologies such as maintaining soil nutrition by replacing fertilizers with organic replacements, including manure and crop residues.²⁹⁸ Furthermore, CSA is able to maintain productivity and consistency in the face of an increasingly volatile climate, with large variations in temperature and water availability.²⁹⁹ For example, in Vietnam, FAO has provided farmers with biogas digesters, replacements for wood and charcoal drawn from animal excrement, which help to prevent deforestation.³⁰⁰ The leftover mixture is used as organic fertilizer.³⁰¹

One of the biggest challenges facing agriculture is an increasing scarcity of freshwater, 70% of which is used for agricultural activities.³⁰² Many farmers lack access to water either due to physical scarcity of water, or an economic inability to afford it.³⁰³ Therefore, it will be necessary to invest in systems which utilize water more efficiently, such as drip feed irrigation, and micro-sprinkler technologies which uniformly distribute small amounts of water over a large area.³⁰⁴ It is also possible to produce freshwater through solar power-based desalination systems, which use energy generated by the sun to remove salt from seawater.³⁰⁵

Social Factors of Sustainable Agriculture – Making Agriculture Work for All

Agriculture provides employment for 2.5 billion people worldwide, this amount includes most of the world's poorest, as those engaged in agriculture are statistically more likely to be experiencing moderate and extreme levels of poverty.³⁰⁶ Declines in agricultural output due to environmental deterioration threaten pledges to eliminate poverty and hunger by 2030.³⁰⁷

Fighting rural poverty

Most of the world's poor live in rural areas and are engaged in agriculture.³⁰⁸ Economic growth in agriculture is, compared with other sectors, two to three times more effective in reducing poverty in low-income states.³⁰⁹ Targeted investments to assist small-scale farmers will have a significant effect in reducing poverty.³¹⁰ However, existing social protection programs do not reach many of those who need them most: only 20% of agricultural workers have access to basic social protections, in part due to much of the work being unregulated.³¹¹ For this reason, FAO is working closely with governments to alter programs and public services in order to better protect the rural poor, and to research how to better protect them in the future.³¹² For example, FAO has created the From Protection to Production initiative, in cooperation with the United Nations Children's Fund (UNICEF), to study the effects of cash transfer programs on the rural poor in seven Sub-Saharan African countries.³¹³ Cash transfer programs consist of payments to poorer and more vulnerable households to help alleviate poverty and to improve health outcomes.³¹⁴ Enabling those engaged in agriculture to have greater income security will allow them to invest in long-term projects such as education and infrastructure.³¹⁵

²⁹⁸ Ibid.

²⁹⁹ Ibid.

³⁰⁰ Ibid., p. 15.

³⁰¹ Ibid., p. 15.

³⁰² The Worldwatch Institute, *State of the World 2011*, p. 39.

³⁰³ ECOSOC, *The role of science, technology and innovation in ensuring food security by 2030*, 2017, p. 8.

³⁰⁴ Giovannucci et al, *Food and Agriculture: the future of sustainability. A strategic input to the Sustainable Development in the 21st Century (SD21) project*, 2012, p.35.

³⁰⁵ FAO, "Climate-Smart" Agriculture, 2010, p. 1; ECOSOC, *The role of science, technology and innovation in ensuring food security by 2030*, 2017, p. 8.

³⁰⁶ FAO, *Statistical Yearbook*, 2013, p. 1; OECD, *OECD Contribution to the United Nations Commission on Sustainable Development 16*, 2008, pp.17-19; World Bank Group, *Who Are the Poor in the Developing World*, 2012, p. 21.

³⁰⁷ FAO, *The State of Food and Agriculture*, 2016, pp. v-vi.

³⁰⁸ FAO, *FAO's Strategic Objective 3: reduce rural poverty*, 2014, pp. 1-2.

³⁰⁹ FAO, *Rural Poverty Reduction*, 2017.

³¹⁰ Ibid.

³¹¹ FAO, *Statistical Yearbook*, 2013, p. 14.

³¹² FAO, *FAO's Strategic Objective 3: reduce rural poverty*, 2014, pp. 1-2.

³¹³ FAO & UNICEF, *From Protection to Production: The Role of Cash Transfer Programmes in Fostering Broad-Based Economic Development in sub-Saharan Africa*, 2014, p. 1.

³¹⁴ Ibid.

³¹⁵ FAO, *FAO's Strategic Objective 3: reduce rural poverty*, 2014, pp. 1-2.

Preventing malnutrition and hunger

Despite the fact that there is enough food production in the world to feed the entire world population, millions of people do not have enough to eat; over 14% of the global population is undernourished.³¹⁶ The effects of hunger and malnutrition are particularly devastating for children, as malnutrition can stunt their development, permanently constraining their physical and mental health.³¹⁷ Fighting hunger requires measures to raise agricultural productivity, tackle poverty and improve food distribution.³¹⁸ Food distribution requires investment, for example in increased and improved food storage facilities, and in the creation and maintenance of the necessary infrastructure to transport food.³¹⁹ Ensuring that everyone has access to sufficiently nutritious food requires measures such as those suggested by the 2014 *Rome Declaration on Nutrition*.³²⁰ These measures include working with governments and NGOs to create and implement awareness campaigns on the importance of adequate nutrition in schools, workplaces and public spaces, and endorsement of nutrition labels so as to allow better awareness of the content of food.³²¹

Conclusion

Agriculture faces many challenges currently, most of which can only be met through international cooperation and a greater focus on implementation.³²² As stated by the Director-General of FAO during his statement to the European parliament in May 2017, “[t]he future of agriculture is not input-intensive, but knowledge-intensive.”³²³ Initiatives to address hunger and poverty need to target those engaged in agriculture, as disproportionate amounts of women and poor people rely on agriculture for their livelihoods.³²⁴ FAO and other international actors can provide the technical and financial support to help Member States make the transition from the high-input methods of the past, to a new sustainable future.³²⁵

Further Research

To further research this topic, delegates should consider questions such as: How to increase collaboration between international actors, states, and local governments to better regulate and extend social protections to the global agricultural workforce? How can efforts to safeguard our soils and restoration of degraded land be accelerated? How can FAO reach farmers located in the world’s most isolated regions, so as to help them adapt to climate change through measures such as CSA? How can international conferences and meetings be more effective in promoting sustainable agricultural practices? Furthermore, how could their outcomes be implemented more effectively?

Annotated Bibliography

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<http://www.fao.org/docrep/014/i2215e/i2215e.pdf>

This report discusses how 9.7 billion people can be fed by 2050 without destroying environmental integrity. It outlines in great detail the key principles behind conservation agriculture, and how FAO assists farmers in putting these principles into practice, helping them transition from a high-input system to a more sustainable one. Delegates should use the ideas and examples contained within this report as a basis for their own ideas and proposals, particularly with regards to conservation agriculture. This report also illustrates the kind of technical knowledge which FAO

³¹⁶ FAO, *Building a common vision for sustainable food and agriculture: Principles and Approaches*, 2014, p. 9.

³¹⁷ FAO, *The Future of Food and Agriculture: Trends and Challenges*, 2017, p. 80.

³¹⁸ FAO, *Strategic Work of FAO for Sustainable Agriculture*, 2017, p. 14.

³¹⁹ FAO, *The Future of Food and Agriculture: Trends and Challenges*, 2017, p. 80.

³²⁰ FAO & WHO, *Conference Outcome Document: Rome Declaration on Nutrition*, 2014, pp. 3-6.

³²¹ *Ibid.*, p. 3.

³²² UN General Assembly, *Agriculture development, food security and nutrition* (A/RES/70/223), 2015.

³²³ FAO, *A statement by FAO Director-General José Graziano da Silva to the Agriculture Committee of the European Parliament on 30 May 2017, in Brussels*, 2017.

³²⁴ World Bank Group, *Who Are the Poor in the Developing World*, 2012, p. 21; UNDP, *Why Does Empowering Women in Agricultural Commodity Production Matter for Tackling Global Poverty and Deforestation?*, 2016.

³²⁵ FAO, *Save and Grow*, 2011, p. 1; FAO, *SAVE FOOD: Global Initiative on Food Loss and Waste Reduction*, 2017; FAO, *“Climate-Smart” Agriculture*, 2010, p. 2.

can distribute to those engaged in agriculture, to assist them with increasing their yields without harming environmental integrity.

Food and Agriculture Organization of the United Nations. (2013). *Stories from the field: Rural Sri Lanka farm families grow more crops* [Report]. Retrieved 12 August 2017 from: <http://www.fao.org/3/a-as700e.pdf>

This is one of FAO's "Stories from the Field." These case studies demonstrate how FAO operates in different countries to help them adopt sustainable agricultural practices. It details how FAO, with funding from the European Union, assisted families in Sri Lanka in re-establishing their agricultural livelihoods after war, restoring many hectares of land to productivity. This report presents a practical example of how FAO can work with other international organizations, governments, and farmers to improve people's lives and their environment. This source will allow delegates to understand how FAO can work with governments to improve the lives of farmers through sustainable agricultural practices.

Food and Agriculture Organization of the United Nations. (2016). *2016 - The State of Food and Agriculture* [Report]. Retrieved 12 July 2017 from: <http://www.fao.org/3/a-i6030e.pdf>

FAO's 2016 annual report contains information on how climate change, food security, and sustainable agriculture relate to one another. The executive summary introduces the reader to the key issues, such as how best to finance adaptation to and mitigation of climate change, in order to maintain future food security. Chapters one through five discuss different aspects of how agriculture can mitigate and adapt to climate change. Chapter six presents ideas on how best to fund these measures. Chapter six will be very useful for delegates wishing to know more about how to finance future proposals. This report will be helpful for delegates because it outlines FAO's approach to helping farmers, particularly smallholders, to cope with the threat posed by climate change to future food production.

Food and Agriculture Organization of the United Nations. (2017). *Strategic work of FAO for Sustainable Food and Agriculture* [Report]. Retrieved 13 July 2017 from: <http://www.fao.org/3/a-i6488e.pdf>

This report introduces the perspective of FAO on how best to achieve sustainable agriculture. It also includes multiple case studies across different regions, which demonstrate how FAO has helped farmers in different countries make the transition to sustainable agriculture. For example, in the Middle East and North Africa, FAO has worked with universities and businesses to create wastewater irrigation techniques, which relieve pressure on already overburdened freshwater systems. Another good example is FAO's work to implement conservation agriculture in Central Asia, which has allowed farmers to increase their output while maintaining good soil health. This is a good place to start for delegates wishing to know what FAO has already done to promote sustainable agriculture, and will be a source for ideas to build upon in position papers.

Food and Agriculture Organization of the United Nations. (2017, January 21). *Taking Malawi farmers a step closer to recovery* [News Article]. Retrieved 14 August 2017 from:

<http://www.fao.org/emergencies/fao-in-action/stories/stories-detail/en/c/466061/>

This news article details FAO's efforts to help farmers in Malawi, who after several months of floods in 2015 followed by drought, were unable to afford any seeds. FAO worked with the CSO Catholic Relief Services to provide farmers with the seeds necessary for the new planting season. Using these seeds, farmers were able to resume their work and to provide for their families. This represents a way in which the international community can directly assist farmers after an environmental disaster. By using this source, delegates will gain a new perspective on how FAO collaborates with CSOs in developing states to improve livelihoods.

Food and Agriculture Organization of the United Nations. (2017). *The Future of Food and Agriculture: Trends and Challenges – Summary Version* [Report]. Retrieved 22 July 2017 from: <http://www.fao.org/3/a-i6881e.pdf>

This report outlines the trends that will shape agriculture in the 21st century, including population growth, migration, and urbanization. Furthermore, it outlines ten key challenges currently facing agriculture: from ending hunger and poverty, to resilience, to natural disasters. In contemplating these trends and challenges, it provides an interesting perspective of how different aspects of sustainable agriculture impact one another. By reading this report, delegates will gain an insight into the future perspectives and priorities of FAO, while also understanding how FAO expects to

change between now and 2050. Delegates should take forecasts on population growth, climate change, and changing patterns of food consumption into account when creating proposals for their working papers.

Giovannucci, D., et al. (2012). *Food and Agriculture: the future of sustainability, A strategic input to the Sustainable Development in the 21st Century (SD21) project*. United Nations, Department of Economic and Social Affairs. Retrieved 14 July 2017 from:

https://sustainabledevelopment.un.org/content/documents/agriculture_and_food_the_future_of_sustainability_web.pdf

This report is associated with the Sustainable Development in the 21st century (SD21) project. This project was created and is overseen by the Division for Sustainable Development of the UN Department of Economic and Social Affairs. The second chapter of this report outlines nine core themes that relate to agriculture, including bio fuels and the role of technology. It then summarizes the views of experts from four different groups, each one with agricultural knowledge about trade, environment, livelihoods, and business. The document discusses different opinions from the public and private sectors on agricultural issues, including how best to tackle land degradation, and how to reduce waste. Delegates will benefit from the different perspectives presented here, and should consider which will be similar to those held by the Member State they will be representing.

Organization for Economic Co-operation and Development. (2008). *OECD Contribution to the United Nations Commission on Sustainable Development 16*. Retrieved 14 July 2017 from:

<https://www.oecd.org/greengrowth/40476046.pdf>

This report was written by the Organisation for Economic Cooperation and Development for the 16th session of the United Nations Commission on Sustainable Development. It brings together results from different OECD reports on various aspects of sustainable agriculture, including desertification, drought, and rural development. It furthermore summarizes the challenges currently facing global agriculture, including increasing demand in the face of diminishing resources. It also looks at policy options to address issues surrounding agriculture, such as altering agricultural subsidies and trade barriers. Reading this document will provide the reader with a more government-focused approach to promoting sustainable agriculture, as well as a perspective from outside the UN system.

University of California, Davis, Agricultural Sustainability Institute. (n.d). *What is sustainable agriculture?*

[Website]. Retrieved 12 July 2017 from: <http://asi.ucdavis.edu/programs/sarep/about/what-is-sustainable-agriculture>

This webpage succinctly explains many of the concepts underpinning sustainable agriculture, providing a useful context to aid delegates' understanding of the topic. It also discusses several sustainable agricultural practices, such as making the best use of resources (especially water) and preserving biodiversity. This is an excellent starting point for delegates unfamiliar with the concepts behind sustainable agriculture, or as a comprehensive summary for those who already possess some background knowledge.

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III. Implementing Strategies for Agricultural Development in Post-Emergency Response Plans

“The rescue of the region's traditional crops and food products will allow to promote better diets and face the double burden of malnutrition.”³²⁶

Introduction

The Food and Agriculture Organization (FAO) of the United Nations (UN) works in different fields to improve the livelihood of malnourished people, among others the agricultural sector.³²⁷ Developing countries greatly rely on the agricultural sector as their primary source of economic growth; therefore, disasters pose a unique threat to development and resilience.³²⁸ Currently, both human-caused and natural disasters are increasing in frequency; for this reason, improving implementation of strategies to sustain agriculture development is necessary for the recovery process.³²⁹ Emergency response plans aim to mitigate the impact of a crisis on the population and the environment.³³⁰ Post-emergency response plans focus on rebuilding population resilience within which agricultural development represents a key factor to achieve this goal.³³¹ They are initiated in the immediate aftermath of an emergency, when a high number of human lives are still at risk, to minimize damages and assure mid and long-term recovery.³³²

It is within the emergency response that the UN, together with other international organizations, non-governmental organizations (NGOs), and local governments, is called upon to implement strategies to restore lasting stability.³³³ Among these strategies, social assistance to vulnerable people, including children and women, supply of resources, and economic aid to agricultural producers, are all essential steps for recovery.³³⁴ Furthermore, the agricultural sector represents the basis of food production and livelihood, which is crucial to ensure nutrition and food security for populations affected by a crisis.³³⁵ Formulating emergency response also means taking into account the emergency-rehabilitation-development continuum, which illustrates the interconnection between post-emergency and rehabilitation interventions.³³⁶ Particularly, FAO has recognized that the continuum for food and nutrition security consists of mitigation, relief, rehabilitation, and development.³³⁷ This connection requires action during the emergency and immediately after, taking into account the ultimate goal of development and enhancement of resilience.³³⁸ Implementing systems to strengthen social capital, which means to empower a community to be able to deal with an emergency by using its own network and resources, needs to be included in any initiative aimed at building community resilience.³³⁹

International and Regional Framework

In 1991, the General Assembly adopted resolution 46/182 on the topic of “Strengthening of the coordination of humanitarian emergency assistance of the United Nations.”³⁴⁰ In this resolution, Member States underlined the importance of coordinating the response among international entities in cases of emergency, and formed the Inter-

³²⁶ FAO, *FAO Director General: Latin America and the Caribbean is on track to eradicate hunger and poverty*, 2016.

³²⁷ FAO, *The State of Food and Agriculture*, 2016.

³²⁸ FAO, *FAO in Emergencies – Resilience*, 2017.

³²⁹ FAO, *FAO in Emergencies – Protect and Build*, 2017.

³³⁰ FAO, *FAO in Emergencies – Enable the Environment*, 2017.

³³¹ Crutchfield, *Phases of Disaster Recovery: Emergency Response Plan for the Long Term*, 2013.

³³² *Ibid.*

³³³ FAO, *FAO in Emergencies – Partners*, 2017.

³³⁴ FAO, *FAO in Emergencies – Protect and Build*, 2017.

³³⁵ *Ibid.*

³³⁶ FAO, *2 Key Issues of Post-Emergency and Rehabilitation Interventions*, 1994.

³³⁷ *Ibid.*

³³⁸ FAO, *FAO in Emergencies – Resilience*, 2017.

³³⁹ Crutchfield, *Phases of Disaster Recovery: Emergency Response Plan for the Long Term*, 2013.

³⁴⁰ UN General Assembly, *Strengthening of the coordination of humanitarian emergency assistance of the United Nations (A/46/182)*, 1991.

Agency Standing Committee (IASC), to that end.³⁴¹ In 2005, the *Humanitarian Reform Agenda* was created by IASC to innovate the ways in which the international community intervenes in cases of emergency.³⁴² By introducing several new elements within emergency response plans, the agenda focused on the introduction of the cluster approach.³⁴³ The aim of the cluster approach is to coordinate the efforts of humanitarian organizations, to avoid unnecessary overlap within specific sectors of intervention.³⁴⁴

Likewise, the *Sendai Framework for Disaster Risk Reduction*, which was adopted by the UN Office for Disaster Risk Reduction (UNISDR) in 2015, is extremely important for reducing the risk and negative impact of disasters.³⁴⁵ The Sendai Framework sets a series of guidelines to execute programs for building resilience within populations affected by disasters, and those that have seen their survival under threat due to agricultural and economic damages.³⁴⁶ The framework further highlights the importance of allocating funds and resources to rebuild social and economic structures in areas identified as being at major risk of disaster reoccurrence.³⁴⁷ The private sector was also recognized in the framework as a key actor in disaster risk reduction.³⁴⁸ The expertise and financial resources owned by private companies, mostly when operating in construction and infrastructure-building, represents an added value that could benefit populations affected by disasters.³⁴⁹ In 2016, the General Assembly adopted resolution 71/226 on the topic of “Disaster Risk Reduction,” which focused on implementing measures for disaster recovery in African countries, middle-income countries, and Small Island Developing States (SIDS), whose economies heavily rely on the agricultural sector.³⁵⁰ Similarly, the Second Committee of the General Assembly has placed particular attention on mitigating disasters and sustainable agriculture in developing countries.³⁵¹ The Second Committee adopted resolution 71/245 on “Agriculture development, food security, and nutrition” in order to stress the concatenation that the three dynamics have between them.³⁵²

The *Maputo Declaration on Agriculture and Food Security* was adopted by the African Union (AU) in 2003.³⁵³ The declaration focuses on various aspects of food security, such as maternal and infant nutrition, potable water for rural communities, and pollutants in water resources used for agricultural irrigation.³⁵⁴ Further, in 2014, the AU adopted the *Malabo Declaration on Accelerated Agricultural Growth and Transformation for Shared Prosperity and Improved Livelihoods*.³⁵⁵ The *Malabo Declaration* directly builds on the *Maputo Declaration* and stresses the importance of implementing sustainable agriculture in developing countries, in order to restore the agricultural sector and ensure nutrition in areas where human-caused emergencies and natural disasters have a more detrimental impact on fragile economies.³⁵⁶ Similarly, the *Kazan Declaration Pledges to Strengthen Food Security* was adopted by the 21 members of the Asia-Pacific Economic Cooperation (APEC) in 2012.³⁵⁷ It calls for international institutions and the private sector to create a framework to address regional food security issues.³⁵⁸ The declaration stresses the role of external stakeholders, like local governments, in fighting hunger and addressing food insecurity in cases of emergency.³⁵⁹ Furthering regional efforts, the Community of Latin American and Caribbean States (CELAC) met in Cuba in 2014 and adopted the *Caracas Declaration and Action Plan of the Authorities of Social*

³⁴¹ IASC, *IASC Transformative Agenda*, 2017.

³⁴² IASC, *IASC Transformative Agenda*, 2017; IASC, *Guidance Note on Using the Cluster Approach to Strengthen Humanitarian Response*, 2006.

³⁴³ *Ibid.*

³⁴⁴ IASC, *IASC Transformative Agenda*, 2017.

³⁴⁵ UNISDR, *Sendai Framework for Disaster Risk Reduction*, 2015.

³⁴⁶ *Ibid.*

³⁴⁷ *Ibid.*

³⁴⁸ *Ibid.*

³⁴⁹ *Ibid.*

³⁵⁰ UN General Assembly, *Disaster Risk Reduction (A/RES/71/226)*, 2016.

³⁵¹ UN General Assembly, *Disaster Risk Reduction (A/C.2/71/L.9)*, 2016.

³⁵² UN General Assembly, *Agriculture development, food security, and nutrition*, 2016.

³⁵³ AU, *Maputo Declaration*, 2003.

³⁵⁴ *Ibid.*

³⁵⁵ *Ibid.*

³⁵⁶ AU, *Malabo Declaration on Accelerated Agricultural Growth and Transformation for Shared Prosperity and Improved Livelihoods*, 2014.

³⁵⁷ APEC, *Kazan Declaration Pledges to Strengthen Food Security*, 2012.

³⁵⁸ *Ibid.*

³⁵⁹ *Ibid.*

Development for the Eradication of Hunger and Poverty.³⁶⁰ Within the *Caracas Declaration*, CELAC stressed the importance of food and nutritional security, particularly the creation of a plan to eradicate hunger and promote food security through new agricultural techniques.³⁶¹ As a result, the *CELAC Plan for Food and Nutrition Security and the Eradication of Hunger 2025* was adopted in 2015.³⁶² The plan recognized that it is crucial to focus on vulnerable categories and the importance of livelihoods, which represent not only a source of nutrition, but is also a method of preserving food habits.³⁶³ Likewise, early warning systems are useful tools able to technically and scientifically evaluate the condition of crops and, in general, of agriculture, by providing important insights about annual growing, condition of nearby aquifers, and potential natural and human-caused threats.³⁶⁴

Role of the International System

The Rome-based UN agencies, FAO, the International Fund for Agricultural Development (IFAD), and the World Food Programme (WFP), coordinate their efforts when it comes to agriculture and food-related strategies in post-emergency response.³⁶⁵ FAO is focused on managing early warning systems, such as the Global Information and Early Warning System (GIEWS) and the Emergency Prevention System for Plant and Animal Pests and Diseases (EMPRES).³⁶⁶ These mechanisms help monitor the food security situation worldwide, and produce reports on potential crisis situations.³⁶⁷ GIEWS also helps Member States and international organizations work on public policies to develop and plan agricultural initiatives.³⁶⁸ Such initiatives are aimed at strengthening countries' capacities in evaluating and managing food security-related issues after emergencies.³⁶⁹ FAO also works with the Consultative Group on International Agricultural Research (CGIAR), which applies science-based research to promote sustainable agriculture and strengthen food security by collaborating with universities, research institutes, private sector organizations, local authorities, and civil society.³⁷⁰ CGIAR works with international and national entities to research agricultural conditions and challenges, with the aim of transforming the approach that local communities have when it comes to agricultural practices and tools.³⁷¹ CGIAR's activities are designed to build the resilience of populations by working directly with them and providing scientific, technical, and practical support to implement mid- and long-term agricultural strategies in the aftermath of an emergency.³⁷²

Given the overlap in their activities, FAO and WFP strategically coordinate their efforts within the cluster system.³⁷³ In this regard, in 2014, FAO and WFP published the *Strategic Evaluation* report, which includes the guidelines created by IASC in the field of humanitarian coordination.³⁷⁴ Each cluster, as defined within the *Humanitarian Reform Agenda*, has one or two leaders that are responsible for coordinating actions among cluster members; FAO and WFP co-lead the Food Security Cluster.³⁷⁵ WFP is considered the primary entity in charge of providing food and non-food items in the aftermath of an emergency.³⁷⁶ Together with FAO, WFP works to implement programs aimed at improving the population's independence in regards to agricultural production after emergencies.³⁷⁷ In 2011, the

³⁶⁰ FAO, *The Community of Latin American and Caribbean States*, 2017; FAO, *Caracas Declaration and Action Plan of the Authorities of Social Development for the Eradication of Hunger and Poverty*, 2014.

³⁶¹ FAO, *Caracas Declaration and Action Plan of the Authorities of Social Development for the Eradication of Hunger and Poverty*, 2014; FAO, *Food Security and Livelihoods*, 2017.

³⁶² *Ibid.*

³⁶³ *Ibid.*

³⁶⁴ *Ibid.*

³⁶⁵ FAO, *About Us*, 2017; IFAD, *Who We Are*, 2017; UN WFP, *Who We Are*, 2017.

³⁶⁶ FAO, *Global Information and Early Warning System (GIEWS)*, 2017; FAO, *Emergency Prevention System for Plant and Animal Pests and Diseases (EMPRES)*, 2017.

³⁶⁷ *Ibid.*

³⁶⁸ *Ibid.*

³⁶⁹ FAO, *Global Information and Early Warning System (GIEWS)*, 2017; FAO, *Emergency Prevention System for Plant and Animal Pests and Diseases (EMPRES)*, 2017.

³⁷⁰ CGIAR, *About us*, 2017.

³⁷¹ *Ibid.*, CGIAR, *CGIAR Research Program on Climate Change, Agriculture, and Food Security 2017-2022*, 2017.

³⁷² *Ibid.*

³⁷³ FAO, *Cluster Coordination Guidance*, 2010; FAO & UN WFP, *Strategic Evaluation*, 2014.

³⁷⁴ FAO & UN WFP, *Strategic Evaluation*, 2014.

³⁷⁵ Food Security Cluster, *About FSC*; FAO, *Cluster Coordination Guidance*, 2010.

³⁷⁶ FAO & UN WFP, *Strategic Evaluation*, 2014.

³⁷⁷ *Ibid.*

IASC held a series of meetings in which FAO emerged as a key actor for agricultural development in emergency-affected countries.³⁷⁸ The FAO Liaison Office in Geneva (LOG) has been identified as the representative of FAO in IASC and provides FAO with analysis, reports, and updates about its work in emergency contexts.³⁷⁹ Additionally, LOG works within the early preparation activities of FAO, IFAD, and WFP.³⁸⁰ Immediately after the 2011 meeting, the Emergency Global Food Security Cluster (GFSC) was created.³⁸¹ The GFSC monitors ongoing emergencies and provides its members with the necessary information and insights, primarily about food and nutrition-related issues.³⁸² The information that both LOG and GFSC are able to provide FAO, allows the organization to tailor specific programs in countries affected by emergencies to restore the agricultural sector.³⁸³ In addition to this, in 2004, FAO established the Special Fund for Emergency and Rehabilitation (SFERA) with the aim of reacting promptly to emergencies while disposing of the necessary funds.³⁸⁴

In 2015, FAO and the United Nations Development Programme (UNDP) launched the Integrating Agriculture in National Adaptation Plans (NAPs) Programme to aid countries in addressing agricultural risks resulting from climate change.³⁸⁵ FAO and UNDP are successfully working with local governments to bolster agricultural skills and tools to mitigate the impact of climate change and climate disaster risks.³⁸⁶ With a total funding of \$15 million, the program helps vulnerable people, especially women, in adopting agricultural practices, such as the rotation of crops, to better face changing climate conditions.³⁸⁷ Likewise, UN specialized humanitarian agencies are promoting the continuation of indigenous agricultural approaches, helping populations to adjust their cultivation practices to better cope with drastic changes in climate conditions.³⁸⁸ The Pacific Humanitarian Team (PHT) and the UN Office for the Coordination of Humanitarian Affairs (OCHA) Regional Office for the Pacific, have developed Emergency Preparedness and Response Plans (EPREPs) in order to coordinate efforts in the aftermath of an emergency in the Pacific area.³⁸⁹ Additionally, the Post-Disaster Needs Assessment and Recovery Framework (PDNA/RF), conducted by Member States jointly with the UN system, the European Commission, and the World Bank, works to produce reports after an emergency to evaluate economic loss, physical damages, and number of people affected.³⁹⁰ This reporting method helps actors prioritize needs in early recovery, as well as identify long-term issues to address in ongoing efforts.³⁹¹ The PDNA/RF combines its studies with rapid assessments conducted by other humanitarian organizations to avoid duplicate reports, and therefore strengthening humanitarian intervention.³⁹²

Similarly, the NGO Rise Against Hunger is committed to working closely with populations affected by emergencies to provide needed assistance.³⁹³ In October 2016, Rise Against Hunger intervened in Haiti after Hurricane Matthew.³⁹⁴ Partnering with ADRA International, Rise Against Hunger was able to reach Haiti to distribute meals and non-food items.³⁹⁵ Further, it follows mid- and long-term agricultural development projects, for example in Belize, where their experts have worked closely with schools that combined education with farming training to teach students new techniques.³⁹⁶ Both Rise Against Hunger and FAO work together in supporting local communities to identify areas near refugee camps that are feasible for growing resilient crops, such as potatoes.³⁹⁷ The identification

³⁷⁸ FAO, *FAO Geneva - Humanitarian Response and Preparedness*, 2015.

³⁷⁹ *Ibid.*

³⁸⁰ Food Security Cluster, *About FSC*.

³⁸¹ Food Security Cluster, *Food Security in Emergencies*.

³⁸² *Ibid.*

³⁸³ *Ibid.*

³⁸⁴ FAO, *FAO in Emergencies – Special Fund for Emergency and Rehabilitation*, 2006.

³⁸⁵ FAO, UNDP, *FAO to Scale Up Assistance to Countries on Addressing Climate Change Risks in Agriculture*, 2015.

³⁸⁶ *Ibid.*, World Conference on Disaster Risk Reduction, *Agriculture and Disaster Risk*, 2015.

³⁸⁷ FAO, *Integrating Agriculture in Natural Adaptation Plans Programme*, 2015.

³⁸⁸ FAO, *Globally Important Agricultural Heritage Systems (GIHAS)*, 2017.

³⁸⁹ Pacific Humanitarian Team, *Emergency Preparedness and Response Plan - A guide to inter-agency humanitarian action in the Pacific*, 2013.

³⁹⁰ *Ibid.*

³⁹¹ *Ibid.*

³⁹² *Ibid.*

³⁹³ Rise Against Hunger, *Nation of Uganda Models: The Importance of Hospitality to Refugees*, 2017.

³⁹⁴ Rise Against Hunger, *Your Help Needed: An Update on Our Crisis Response Efforts in Haiti, the Philippines*, 2016.

³⁹⁵ *Ibid.*

³⁹⁶ Rise Against Hunger, *A firsthand look at Farming, Education, and Women's Empowerment in Belize*, 2016.

³⁹⁷ Rise Against Hunger, *Nation of Uganda Models: The Importance of Hospitality to Refugees*, 2017.

of those areas is aimed at both finding territories that contain suitable soil, and that do not undermine relationships with established local populations.³⁹⁸ The production of food allows displaced communities to build self-sustaining lives, which can also improve integration and community building within the local social and economic context.³⁹⁹

Case Study: The Horn of Africa Cross-border Plan for Drought

The Horn of Africa can be considered a key example of the work of FAO in regards to aiding an emergency and developing mid- to long-term strategies for agricultural development.⁴⁰⁰ In early 2017, FAO adopted *the Horn of Africa Cross-Border Drought Action Plan* to help the devastating situation caused by drought in Ethiopia, Kenya, Somalia, South Sudan, and Uganda.⁴⁰¹ The severity of this emergency situation has been evaluated based on several factors, including receiving only a quarter of expected rainfall in the region, and the desertification of large areas previously utilized for growing crops.⁴⁰² *The Horn of Africa Cross-Border Drought Action Plan* prioritizes intervention to reduce food insecurity in the region and improve the resilience of drought-affected households involved in pastoral and agricultural activities.⁴⁰³

The main priority of the plan is to safeguard the livestock of the rural population.⁴⁰⁴ The immediate action that has been undertaken by FAO is aiding rural and poor communities in managing water resources, rotating crops, and providing shelters and food for livestock, which altogether lays the groundwork for sustainable agriculture.⁴⁰⁵ FAO is working with local communities, in particular vulnerable groups, in order to implement initiatives to take advantage of areas that are still suitable for crops, taking into consideration the availability of aquifers.⁴⁰⁶ These initiatives allow producers to gain financial support for themselves and their families, as well as to make the local economic sector more dynamic by promoting local products.⁴⁰⁷

Case Study: Agricultural Development As a Tool for Stabilizing the Economy During Emergencies

In the case of ongoing human-caused emergencies triggered by civil wars or transnational tensions, effective emergency recovery can also be accomplished by working on agricultural initiatives that build resilient communities.⁴⁰⁸ Yemen, with its agricultural-based economy, is suffering because of a protracted conflict which has led to a humanitarian and economic crisis.⁴⁰⁹ Currently, 55% of the Yemeni population lives in poverty; half of Yemen's population is affected by hunger.⁴¹⁰ The scarcity of both natural resources and food, and a lack of employment opportunities, have caused an unprecedented food emergency.⁴¹¹ In fact, recent figures show that over 13 million Yemenis are suffering from food scarcity and an additional 6 million are at risk of starvation.⁴¹² The agricultural sector is a fundamental aspect of the Yemeni economy, including crops, fisheries, livestock, and forestry production.⁴¹³ Prior to the conflict, Yemen was able to provide much of its population with locally produced staple food products.⁴¹⁴ Currently, Yemen has to rely on importing 85% of its staple cereal and grain products at high prices.⁴¹⁵ For this reason, FAO is currently working to address and strengthen agricultural development within the country, trying to avoid dependence on foreign sources of food.⁴¹⁶ Moreover, since the civil war began in 2015, the

³⁹⁸ Ibid.

³⁹⁹ Ibid.

⁴⁰⁰ FAO, *Horn of Africa Cross-Border Drought Action Plan 2017*, 2017, p. 1.

⁴⁰¹ Ibid.

⁴⁰² Ibid.

⁴⁰³ Ibid.

⁴⁰⁴ Ibid., p. 1.

⁴⁰⁵ Ibid., p. 4.

⁴⁰⁶ Ibid., p. 6.

⁴⁰⁷ Ibid., p. 5.

⁴⁰⁸ FAO, *FAO in Emergencies – Protect and Build*, 2017.

⁴⁰⁹ FAO, *Yemen Plan of Action 2014-2018*, 2014.

⁴¹⁰ FAO, *Yemen - Emergency Livelihoods Response Plan*, 2017.

⁴¹¹ Ibid.

⁴¹² Douglas, A storm without rain: Yemen, Water, Climate Change, and Conflict, *The Center for Climate and Security*, 2016.

⁴¹³ FAO, *Yemen Plan of Action 2014-2018*, 2014.

⁴¹⁴ FAO, *Yemen - Emergency Livelihoods Response Plan*, 2017.

⁴¹⁵ Ibid.

⁴¹⁶ FAO, *Yemen - Emergency Livelihoods Response Plan*, 2017.

fighting has severely limited access to water.⁴¹⁷ The destruction of water transport infrastructure has led to an increase in the price of water, coupled with the difficulty in delivering water.⁴¹⁸

In 2014, FAO actively promoted the *Yemen Plan of Action 2014-2018*.⁴¹⁹ FAO outlined its aim to intervene in order to reduce food insecurity, enhance women’s participation in agriculture, and ensure the mobilization of funds and resources for the sustainability of the agricultural sector.⁴²⁰ Since Yemen is facing a complex three-year emergency, FAO has based its approach in contributing to peacebuilding efforts.⁴²¹ FAO’s strategy is divided into three phases: a short phase focused on measures to provide food and non-food items to the population directly affected; a medium term phase, which focuses on agricultural livelihood and building resilience by looking for unaffected shelter areas; and a long-term phase in which FAO will work with urban and rural communities to develop sustainable agriculture.⁴²² Compounding the human-caused crisis, Yemen is also responding to severe climate events such as sea-level rise and drought.⁴²³ Particular attention is given to water resources as Yemen is considered a highly water-stressed Member State.⁴²⁴ A critical aspect that FAO is currently addressing is the inclusion of women in agriculture, by providing them access to the same assets, resources, and services as men.⁴²⁵ The malnourishment of Yemeni women has dramatically increased in the wake of the current crisis and is affecting the agricultural system where they were playing a key role before the worsening of the complex emergency.⁴²⁶

Conclusion

Implementing strategies to foster agricultural development needs to be considered a priority within emergency response plans.⁴²⁷ Strengthening the agricultural sector means enhancing the resilience of populations, by ensuring that they will maintain their livelihoods after a disaster or crisis.⁴²⁸ FAO, together with WFP and IFAD, plays a key role in implementing agriculture-oriented strategies within emergency response plans.⁴²⁹ Broad support from the UN system, NGOs, regional entities, and local communities, enables FAO to conduct assessments after the occurrence of an emergency, and to start working on the restoration of lasting stability.⁴³⁰ Furthermore, FAO and WFP co-lead the Food Security Cluster to coordinate the efforts of humanitarian agencies both in the aftermath of an emergency, where WFP plays a key role, as well as in the mid- to long-term, where FAO works closely with IFAD and local organizations to ensure long-term stability.⁴³¹

Further Research

As delegates commence further research into the topic, it is important to keep in mind some of FAO’s most recent actions. Within their research, delegates should look to answer some key questions: Can FAO implement further practices to better coordinate efforts with the other Rome-based agencies when it comes to agricultural development? How can FAO and WFP enhance their level of coordination within the Food Security Cluster? Does agricultural development need to be considered a key priority in case of natural disasters, human-caused emergencies, or both? Is the FAO, and more generally, the international community, taking full advantage of technologies, such as early warning mechanisms or systems for land mapping?

Annotated Bibliography

⁴¹⁷ Douglas, A storm without rain: Yemen, Water, Climate Change, and Conflict, *The Center for Climate and Security*, 2016.

⁴¹⁸ Ibid.

⁴¹⁹ FAO, *Yemen Plan of Action 2014-2018*, 2014.

⁴²⁰ Ibid.

⁴²¹ Ibid.

⁴²² Ibid.

⁴²³ Ibid.

⁴²⁴ Ibid.

⁴²⁵ Ibid.

⁴²⁶ Ibid.

⁴²⁷ FAO, *FAO in Emergencies – Protect and Build*, 2017.

⁴²⁸ FAO, *FAO in Emergencies – Resilience*, 2017; FAO, *Resilience*, 2017.

⁴²⁹ FAO, *FAO Geneva - Humanitarian Response and Preparedness*, 2015.

⁴³⁰ Ibid.

⁴³¹ Food Security Cluster, *About FSC*.

Food and Agriculture Organization of the United Nations. (1995). *Agriculture, Food and Nutrition in Post-Emergency and Rehabilitation* [Report]. Retrieved 14 July 2017 from: <http://www.fao.org/docrep/003/V5611E/V5611E00.htm#TOC>

This report provides an overview of the activities of FAO related to food security and post-emergency response. Furthermore, it underlines important guidelines that the FAO undertakes in the aftermath of an emergency. It focuses on two main aspects: ensuring nutrition during and after an emergency, and food security as a matter of post-emergency rehabilitation. Those activities require coordination with other humanitarian entities, and the resource is able to provide delegates with useful information and insight about that cooperation. Moreover, the report provides a complete overview of the topic. Delegates can use it as a starting point for further research, and as a source to understand FAO's area of expertise in post-emergency response.

Food and Agriculture Organization of the United Nations. (2010). *Cluster Coordination Guidance* [Website]. Retrieved 15 July 2017 from:

http://fscluster.org/sites/default/files/documents/FAO%20Cluster%20Coordination%20Guidance%202010_0.pdf

This resource addresses a topical issue related to food, agriculture, and emergencies. It focuses on the cluster approach, which allows the actors involved in an emergency to coordinate their efforts. The cluster approach has been actively promoted by UN OCHA and IASC since both entities noticed the necessity to divide humanitarian intervention into sectors. Particularly, it has been important in order to avoid overlaps among humanitarian actors within emergency response operations. Delegates will find this source useful as they explore issues relating to the coordination between actors involved during emergency response, and the role of FAO in particular.

Food and Agriculture Organization of the United Nations. (2017). *FAO in Emergencies – About* [Website]. Retrieved 14 July 2017 from: <http://www.fao.org/emergencies/en/>

The number of both human-caused and natural disasters is increasing. The impact of these crises on agriculture has been challenging to manage. FAO has dedicated a specific division to address crisis-related issues while improving the efforts of the organization in emergencies. This resource provides delegates with an overview about the role of FAO and the implementation of agricultural programs that has been recognized as a key priority within emergency response operations. Moreover, the website includes several resources, including country profiles and reports, that will help delegates to further develop their research on the topic.

Food and Agriculture Organization of the United Nations. (2017). *FAO Geneva - Humanitarian Response and Preparedness* [Website]. Retrieved 13 July 2017 from: <http://www.fao.org/geneva/core-areas/humanitarian-response/en/>

The complex nature of natural and human-made crises requires FAO to be more involved in the first phases of an emergency, and not only during the rehabilitation and development phases. This resource is an important starting point for delegates' research, since it explains FAO's role in humanitarian response. The website provides important insight into FAO's work to rebuild populations' resilience by restoring livelihoods. It is also an important source from where to draw conclusions on how FAO could enhance its role in the early aftermath of an emergency.

Food and Agriculture Organization of the United Nations. (2017). *Food Security and Livelihoods* [Report]. Retrieved 15 July 2017 from: <ftp://ftp.fao.org/docrep/fao/010/aj033e/aj033e00.pdf>

FAO focuses on increasing the level of food security of populations affected by emergencies. This report explains what has been done by FAO to ensure food security and nutrition, together with the protection of livelihoods and resilience of populations, primarily in developing countries. The document provides delegates with important information on how food security and protection of livelihoods are strictly related with the reduction of populations' vulnerability. Delegates can use this source to focus on additional aspects of FAO's role in emergencies, which encompass the evaluation of risks and damages caused by a disaster, the implementation of early recovery measures, and the assurance of the emergency-rehabilitation-development continuum.

Food and Agriculture Organization of the United Nations. (2017). *Global Information and Early Warning System (GEWIS)* [Website]. Retrieved 17 August 2017 from: <http://www.fao.org/gIEWS/background/en/>

The early warning systems operated by FAO play a key role in monitoring the conditions of countries and regions affected by disasters. In this regard, the Global Information and Early Warning System (GEWIS) is an important tool that allows monitoring of specific situations of risk, such as drought, potential floods, and violent conflicts. Also, it allows for the sharing of information and data within the UN system about further potential risks. Delegates will benefit from reading more about the GEWIS, since it represents an important tool to protect livelihoods and it could represent a starting point for further research about the use of technology and technology implementation in regard to agricultural development.

Food Security Cluster. (n.d.). *Food Security in Emergencies* [Website]. Retrieved 15 July 2017 from: <http://foodsecuritycluster.net/food-security-emergencies>

This resource allows delegates to better understand the relation between the actions undertaken in the aftermath of an emergency and their consequence when it comes to mid- and long-term strategies. The way in which emergency response is conducted in the immediate aftermath of a crisis has a direct impact in the implementation of future strategies. It is important to consider local necessities, such as particular crops that represent both a source of food and money, instead of a different resource which is not essential for the survival of the population affected by a disaster. This website can help delegates in developing ideas and proposals on the protection of natural resources and agricultural production in the very first phases of emergency response.

Inter-Agency Standing Committee. (2017). *IASC Transformative Agenda* [Website]. Retrieved 19 August 2017 from: <https://interagencystandingcommittee.org/iasc-transformative-agenda>

The Transformative Agenda represented a considerable change in the way humanitarian assistance was delivered. IASC has actively promoted the revision of its response mechanism when it comes to complex emergencies, and the Transformative Agenda is the result of that process. Through the cluster approach, IASC has set a baseline in the enhancement of emergency response and its efficiency. Moreover, the coordination among humanitarian actors and local authorities has been recognized as a crucial aspect for humanitarian intervention. Delegates will benefit from this resource since it is able to provide them with a detailed overview of the Transformative Agenda and the cluster approach.

United Nations, General Assembly, Forty-sixth session. (1991). *Strengthening of the coordination of humanitarian emergency assistance of the United Nations (A/RES/46/182)* [Resolution]. Adopted without reference to a Main Committee. Retrieved 21 August 2017 from: <http://undocs.org/A/RES/46/182>

This resolution of the UN General Assembly about the strengthening of the coordination of humanitarian emergency assistance provides an overview of the historical basis for the provision of humanitarian assistance by the UN. In this resolution, the General Assembly identified the seven items that are key for the response to emergency situations, encompassing guiding principles, preventive measures, on-site capacities, as well as what concretely needs to be done to continue from relief to development. Delegates should consult this source to gain an understanding of the foundational approach of the UN when it comes to humanitarian assistance.

United Nations, World Conference on Disaster Risk Reduction. (2015). *Agriculture and Disaster Risk* [Report]. Retrieved 12 July 2017 from: <http://www.wcdrr.org/documents/wcdrr/prepcom1/UN/ATTFONWO.pdf>

The United Nations system has many entities that work within emergency response. It is for that reason that guidelines and constant updates are necessary to ensure efficient coordination among them. This report was elaborated in preparation for the Third World Conference on Disaster Risk Reduction. The disaster risk reduction approach works to increase the resilience of populations and reduce risks and vulnerabilities when facing a crisis. Delegates will benefit from this resource since it explains the connection between agriculture, livelihoods, and the disaster risk reduction approach. Moreover, delegates will benefit from learning more about the approach discussed during the Conference since they draw conclusions on what has been implemented, as well as what is necessary to work on in the future.

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