

## World Hunger Challenges and Solutions

***"After a decade of steady decline.... the number of people who suffer from hunger has slowly increased" for several years in a row, "underscoring the immense challenge" of meeting the UN's goal of ending hunger by 2030. (FAO. State of Food Security and Nutrition in the World. Safeguarding against economic downturns. Rome. 2019)***

### **1. World Hunger Challenges**

Will the citizens of the world do what needs to be done to ensure the availability and accessibility of sufficient and nutritionally appropriate food to meet the needs of all the world's people? At the present time that goal is not being met and unless we take action quickly, the number of poorly nourished people will continue increasing. In large measure, we know what we need to do. But will we do it?

There are many challenges. First, we need to understand the scope of the problem. Why is the number of undernourished people in the world, after declining for several years, once again on the rise? Note that, it is the number that is increasing. The percentage is staying about the same indicating a slacking off of the progress that had been made earlier. At the same time, why is obesity, another nutritional anomaly, on the rise and why is it increasing even in poor countries?

#### **a) Africa**

The prevalence of hunger in Africa had been declining for several years. In 2015 it was 18.3 %. Then in 2017 it once again began to increase. *At the present time, 257 million Africans (almost 20% of the population) are undernourished.* Several factors including conflict along with increases in droughts and floods have exacerbated the problem. (FAO and Economic Commission of Africa. Regional Overview of Food Security and Nutrition. 2018). Ironically, obesity is also increasing even in rural communities but mostly in urban areas. Individuals who experienced hunger as children are more prone to becoming obese as adults. In addition, those living in urban areas and even in some rural areas now have easy access to cheap, often imported junk food. Obesity is not only associated with the consumption of too much food but also of food that is deficient with respect to zinc, iron, vitamins A,C,D, and E. (Hunger & malnutrition in the 21st century. British Medical Journal. 2018:361:k2238).

#### **b) Latin America and the Caribbean**

*Between 2011 and 2013 Latin America and the Caribbean experienced a decline in hunger. Unfortunately, in 2016, the number of undernourished people increased by 6%. The rate of obesity in both children and adults also increased. The area has also experienced a decline in economic growth in recent years.* At the same time the sales of ultra-processed food and high sugar content beverages increased partly because they are cheaper per calorie than more nutritious foods and also because they are more readily available in poor neighborhoods than are more nutritious fresh fruits and vegetables. (FAO and Pan American Health Organization. Panorama of Food and Nutrition Security in Latin America and the Caribbean. 2017).

#### **c) Asian-Pacific Region**

*The Asian Pacific region is home to half of the world's malnourished children. Although malnutrition rates in the region have been declining, in the last few years the rate of decline has slowed and is now minimal.* Given that malnutrition in the region is due to a multitude of causes including poverty as well as poor access to food markets, clean water, sanitation, and education, a wide range of initiatives are needed to address the problem. In addition, as climatic related problems increase, efforts must be made to improve the resiliency of food systems. Ironically the number of obese people has also increased, especially in the urban areas, due in part to their limited access to healthy food choices. (FAO, UN, UNICEF, World Food Programme, and World Health Organization. Asia and the Pacific Regional Overview of Food Security and Nutrition. 2018).

The remainder of this report will describe some of the factors that are contributing to increases in hunger and then focus on current efforts to reduce world hunger.

## **2. Hunger: Contributing Factors**

### **a) Climate Change**

"As citizens of the world we must protect our planet from physical, economic, and public health effects of climate change while providing pathways to economic prosperity." (League of Women Voter U.S. Website).

In 2013 the International Panel on Climate Change (IPCC) began examining the role of human activity in the warming of the earth. In 2018, a special IPCC report (IPCC. Climate Change and Land. Executive Summary October 2018) described how the greenhouse gases that occur naturally in the environment are important because they keep some of the sun's warmth from reflecting back into space, thus making it possible for life to survive on earth. However, now, due to human activities such as industrialization, deforestation, and a wide range of agricultural practices, the amount of greenhouse gases in the earth's atmosphere is increasing. Unfortunately, these gases are preventing an ever-increasing amount of the sun's heat from escaping. Hence, the earth is warming at an alarming rate.

More specifically the report noted that "In 2017, human activities are estimated to have caused approximately 1.0°C of global warming above pre-industrial levels, with a likely range of 0.8°C to 1.2°C. Global warming is likely to reach 1.5°C between 2030 and 2052 if it continues to increase at the current rate "(p. 6) This is an average temperature, some areas will have higher levels and some lower). The report warned that if we do not limit average global warming to 1.5 degrees centigrade, major ecosystem changes will occur. Some will be irreversible.

The report was presented at the UN Climate Change Conference in Poland in December 2018. Despite the report's dire warnings, conference delegates did not seek to lower the goal of limiting the maximum average global temperature increase to under 2 degrees, the limit that had been set by the Paris Climate Change Conference back in 2015. (Although these differences in temperature goals may seem minor, very small increases can result in catastrophic environmental changes. In addition, the degree changes being discussed are average temperature changes. The increases are and will continue to be higher in some areas and lower in other areas.

The report also noted that climate related disasters such as storms, floods, and excessive heat are already interfering with agricultural production and will have an even greater impacts in the near future. These disasters also cause food price increases and at the same time lower income for small farmers who lack the resources to protect their crops from the negative impact of climate change. In addition the report warned that the impact of warming as well as the burdens associated with mitigation action will disproportionately fall on the world's poor. Steps need to be taken both to lessen these impacts and to compensate those who suffer from them.

A serious threat to world's efforts to successfully mitigate the dire impact of climate change, is President Trump's decision to withdraw the U.S.'s from the 2015 Paris Accord on climate change mitigation. Officially the withdrawal will take effect on November 4, 2020.

In addition, little progress was made at the December 2019 UN Climate Change Conference COP25 that was recently held in Madrid. Most major matters were deferred until COP26 that will take place next year in Glasgow, Scotland. COP25 did adopt a 5 year gender action plan including efforts to scale up "gender-just climate solutions." ([www.wedo.org/advances-for-gender-equality-at-cop25](http://www.wedo.org/advances-for-gender-equality-at-cop25)) .

#### b. Land use changes

The amount of land devoted to agriculture has increased over the years and now about 50% of the world's habitable land is used for agriculture and about 80% of that agricultural land is used to produce livestock. (Hannah Ritchie and Max Rosen, "Land Use," Sept 2019. [www.ourworldindata.org/land-use](http://www.ourworldindata.org/land-use).) "Approximately 25 per cent of the globe's greenhouse-gas emissions come from land clearing, crop production and fertilization, with animal-based food contributing 75 per cent of that." (Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services - ADVANCE UNEDITED VERSION – 6 May 2019)

#### c. Land degradation

Many agricultural practices including those associated with industrial farming have contributed to *land degradation*. These practices include deforestation, overgrazing of land, faulty irrigations systems that cause salinization of the soil, and the overuse of fertilizers that lead to soil acidification.

Degraded land must be handled carefully to prevent it from deteriorating further and becoming useless desert. A number of promising programs addressing land degradation are already in place. In Africa, "the AGRA Soil Health Programme promotes the adoption of integrated soil fertility management. Another African project encourages the use of small-scale irrigations systems that rely on ground water instead of building large scale costly irrigations system. In the USA, programs such as the Environmental Quality Incentives Program (EQIP) and the Conservation Stewardship Program (CSP) financially assist farmers who adopt soil conservation practices and the Conservation Reserve Program (CRP) provides financial benefits to farmers who remove land from agricultural production for at least 10 years, or who adopt certain water saving practices. (US Dept. of Agriculture, Economic Research Service. [[ers.usda.gov/topics/natural-resources-environment/conservation-programs](http://ers.usda.gov/topics/natural-resources-environment/conservation-programs)]).

Programs such as these are helpful, but land degradation is continuing at a rapidly advancing pace. Indeed, on September 9, 2019 at the opening ceremony of the 14th Session of the Conference of

Parties (COP14) to the United Nations Convention to Combat Desertification, the UN Deputy Secretary-General Amina Mohammed made a strong call for action. He stated that "the latest scientific data shows that a...massive effort is painfully overdue. A quarter of our greenhouse emissions come from land degradation. A million species face extinction, threatening ecosystems that provide everything we eat, drink and breathe. And the lives of half — half — the people on this planet are affected by desertification, land degradation and drought." (UN Deputy Secretary-General Amina Mohammed. Critical Massive Effort Needed. UN Press Release. Sept 9,2019) .

At the conference a number of programs and agricultural practices that advance land preservation and restoration were identified. In addition, participants recognized that land restoration is way to enhance the economic well-being of communities. (Institut du Developpement Durable et des Relations Internationales. Institute for Development and International Relations, October 1, 2019. Blog Post. COP 14 on Dessertification.)

#### **d) Excessive deforestation and loss of carbon sinks**

People all over the world are increasing their meat consumption. Consequently, forests are being removed to make land available to graze animals and to raise crops to feed animals. .

As I write this, vast parts of the Amazon's forest are on fire. Many are blaming the current President of Brazil, Jair Bolsonaro, who recently came to power and immediately weakened legislation aimed at protecting the Amazon forests. President Bolsonaro is interested in expanding Brazilian exports of agricultural products especially meat to European countries. In addition, President Trump is also considering lifting a current ban on U.S. meat imports from Brazil.

The Amazon forest is a major world carbon sink. Many experts believe the forest is reaching a tipping point, and that ultimately the area will become a savanna ecosystem. Unfortunately, in the process, the world will have lost a critical carbon sink and the consequences of that will be enhanced' global warming. ( Fen Montaigne. Will Deforestation and Warming Push the Amazon to a Tipping Point? [Based on interview with Carlos Nobre]. Yale Environment. Sept. 4 2019).

#### **e) Declining crop and livestock diversity**

Beginning in the1990ies there has been marked decline in the diversity of crops the world produces. Lack of diversity increases susceptibility of crops to diseases and pests. The FAO. recently assessed the problem and ways to address it. (FAO. News Article. The Biodiversity that is crucial for our food system is disappearing day by day. Rome. Feb 22, 2019).

According to the news summary, the report stated that "the foundation of our food system is under severe threat" and noted that "of some 6,000 plant species cultivated for food, fewer than 200 contribute substantially to global food output, and only nine account for 66 percent of total crop production." In addition," the world's livestock production is based on about 40 animal species, with only a handful providing the vast majority of meat, milk and eggs." Diversity is a critical component as it provides the material needed to develop new breeds of plants and animals. The report also cautioned that there has been a marked decline in wild food species as well as in many animal species that play major roles in advancing and protecting agricultural productivity. For example, birds, bat and insects

improve soil biodiversity and help control pests and diseases. Bees, butterflies, bats, and birds also serve as wild pollinators.

#### **f) Expansion of industrial agriculture throughout the world**

Many of the problems noted above, but especially the decline in crop and livestock diversity are being further advanced by the expansion of large scale industrial farms in the US as well as in many other countries around the world.

#### **g) Inadequate security for women farmers.**

Women make up a large proportion of the world's farmers. They are more likely to be negatively impacted by climate change than men farmers given that their land rights are less secure and their access to finance, technology, and information is more limited. (The Agricultural Committee is preparing a companion report that will deal exclusively with issues relevant to women farmers. We expect to complete the report in Spring 2020).

#### **h) Conflict**

"Conflict and insecurity are the primary drivers of food insecurity in 18 countries where almost 74 million are food insecure." (World Food Programme. 2018 Global Report on Food Crisis. 21 March 2018).

### **3. Solutions**

#### **a) Climate Change Requires Agricultural Change**

The International Panel on Climate Change (IPCC) was established in 2013 to examine the role of human activity in the warming of the earth. In a special report, issued in October 2018, the panel described how the greenhouse gases that occur naturally in the environment are important because they keep some of the sun's warmth from reflecting back into space, thus making it possible for life to survive. But now, due to human activities such as industrialization, *deforestation*, and many current agricultural practices the production, the amount of greenhouse gases in the earth's atmosphere is increasing. Consequently, these gases now keep too much of the sun's heat from escaping. Hence, the earth is warming.

In 2018, the IPCC cautioned us that if we do not limit global warming to 1.5 degrees centigrade, major ecosystem changes will occur. Some will be irreversible. (Climate Change and Land; IPCC. October 2018)

**Then on August 6 2019, the IPCC panel declared that "unless we alter our agricultural system we will not be able to keep global temperature rise below 1.5 degrees centigrade." (*IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse gas fluxes in Terrestrial Ecosystems Summary for Policymakers Approved Draft Subject to copy edit and layout Date of draft: 07 August 2019*) To do so, we must revamp our agricultural system by 1) increasing the amount of land covered with trees or other types more permanent vegetation, and 2) reduce greenhouse gases associated with raising livestock.**

Currently, industrial farming dominates the world's food production system. **Industrial agriculture** "is a form of modern farming that refers to the industrialized production of livestock, poultry, fish, and crops. The methods of industrial agriculture are technoscientific, economic, and political. They include innovation in agricultural machinery and farming methods, genetic technology, techniques for achieving economies of scale in production, the creation of new markets for consumption, the application of patent protection to genetic information, and global trade. These methods are widespread in developed nations and increasingly prevalent worldwide. Most of the meat, dairy, eggs, fruits, and vegetables available in supermarkets are produced using these methods of industrial agriculture." (New World Encyclopedia 2019) It also promotes the consumption of highly processed foods, that are generally high in fat and low in nutritional value.

In addition to the negative impact on food consumption patterns, industrial farming is contributing to a decline in biodiversity and therefore on the ability of plants and animals to adjust to climate change.

Receptivity of the FAO to promoting more sustainable agricultural system, including agroecological farming systems, has gradually increased under the leadership of Director General Graziano de Silva who recently held two symposiums on agroecology. His nonrenewable term in office expired this year and in August, his replacement, Qu Dongyu of China' assumed the role of Director General of FAO. Little is known publicly about the new Director General's views on world agricultural issues.

In October 2019 the new director officiated at an important meeting in Rome of the UN Committee on World Food Security. That meeting focused on identifying sustainable agricultural practices. In preparation for this meeting, the UN Committee on World Food Security requested that the High Level Panel of Experts prepare a report on sustainable agricultural practices.

The completed report stressed that a "profound transformation of the world's agricultural system is needed to achieve food security and meet nutritional goals" while at the same time meet "the complex challenges of population growth, expanding urbanization, and climate change that then put pressure on natural resources, negatively affect the quality and availability of land and water resources, and reduce biodiversity." (High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, Rome 2019. Full report forthcoming at [www.fao.org/cfs/cfs-hlpe](http://www.fao.org/cfs/cfs-hlpe). HLPE Report on Agroecological and other innovative approaches for sustainable Agriculture. Rome. 2019).

The report identified agroecology as an approach capable of providing such a transformation and defined agroecology as "an integrated approach that simultaneously applies ecological and social concepts and principles to the design and management of food and agricultural systems" and "seeks to optimize the interactions between plants, animals, and the environment while taking into consideration the social aspects that need to be addressed for a sustainable and fair food system." Initially only small-scale farms adopted agroecological practices, however, now these practices are also being used on larger farms.

Meanwhile, those promoting the expansion of industrial agriculture as the solution, claim that the development of very large, very concentrated, and very efficiently managed farms will free up other land for reforestation and biodiversity protection. They say that researchers, committed to this type of farming, are and will continue to improve the nutritional quality of food through the development and production of seeds that produce highly biofortified food crops. Those advocating this approach do not

seem to be concerned about the concentration of power that is and would be further advanced under such a scenario.

The darker side of industrial agriculture is rarely exposed and documented. . However, a book published in 2019, titled Eating Tomorrow, and written by Timothy A. Wise, did just that. He examined "in depth and onsite" agricultural activities in Africa, Mexico, India and the U.S. He described, in detail, how many industrial farming practices contribute to land degradation, and, in addition, fail to meet the economic and nutritional needs of farmers, their families, and their surrounding communities. In contrast, he found that when small scale farmers were provided adequate support and information, they improved their soils, successfully adopted many other agroecological practices. This enabled them to provide healthy food for their families and their community. In addition, their yields were such that they could then sell also sold some of the yields are also being successfully processed by local, small scale operations for local consumption. Timothy Wise is a senior researcher at the Land and Food Rights Program at Small Planet Institute as well as the Research and Policy Program at Tufts University's Global Development and Environment Institute in Massachusetts .

We, the world's inhabitants must decide how we can best meet the world's food needs in the coming years. To do so, we must continuously educate ourselves as to the options and the broader social, economic, and environmental consequences of these options. In addition, we must work to promote the adoption of agricultural practices that address soil degradation, deforestation and biodiversity decline.

#### **b) Empower Woman**

After decades of neglect the rights of women farmers are finally beginning to be recognized and efforts are being made to strengthen those rights. The International Food and Policy Research Institute recommends that all agricultural development programs should be designed and evaluated with respect to the degree that they "**reach, benefit, and empower**" women farmers. More specifically, programs should be designed to increase women's well-being, food security, income, health, and decision-making power. They must also allow women to fully participate in all components of programs aimed at improving agricultural production . (International Food Policy Research Institute. Reach, Benefit, and Empower: Clarifying Gender Strategies of Development. Dec, 2016)

( NOTE: The agricultural committee, the group responsible for the report you are now reading, is also working on another report that will focus specifically on women's roles and rights with respect to agriculture. We hope to complete that report in the late spring of 2020.)

#### **c). Empower the Public**

It is critical that efforts be made to improve the public's understanding of agricultural issues and challenges so as to motivate us all to advocate for a more justice and environmentally appropriate agricultural system.

#### **4) The Role of the LWVUS in Agricultural and Climate Change Issues.**

The LWVUS has a position on Climate Change and has designated it as a grassroots action priority. The League " supports the globally-agreed upon goal of limiting global warming to 1.5 degree centigrade."

It also sent representatives to the recently held climate conference in Poland ( For information about that conference, please see page 3-4 above).

In 2014 the LWVUS conducted a study on U.S. agricultural policies but did not examine the impact of the U.S.'s agricultural system on world agriculture. It did however, peak our interest in examining that impact and led us to organized the Baltimore County League's World Agriculture Study Group, the group responsible for the study you are now reading.

LWVUS, through its UN permanent observers, regularly advocates for women's rights issues. In 2018, the League appointed, in addition to its permanent observers, a number of League member from around the country to represent the League at the world's annual conference of UN Commission on the Status of Women ( CSW 2018). That *conference was dedicated to the challenges and opportunities related to achieving gender equalities and empowerment for **rural woman and girls***. In addition, Roberta Sharper , a member of the committee responsible for the document you are now reading , attended one of the conference's side events. That event was also chaired by one of the LWVUS's permanent observers.

The LWVUS has also taken legal action in connection with climate change by submitting an amicus brief to support plaintiffs ( 21 young people) in their claim that the U.S. government is violating their rights "by promoting an energy system that is harmful to their well-being. ([www.org/blog/league-ste-climate-action](http://www.org/blog/league-ste-climate-action).)