

Climate Change, Population Growth, and Hunger in the 21st Century – A MAHB Dialogue with Gernot Laganda

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Sharing our World

Gernot Laganda is the Chief of the Climate Change and Disaster Risk Reduction Programmes for the United Nations World Food Programme (WFP).

Geoffrey Holland: What is food insecurity, and how is it central to the mission of the UN World Food Programme?

Gernot Laganda: Food insecurity exists when people lack access to sufficient amounts of safe and nutritious food for normal growth and development and an active and healthy life.

Conceptually, food security analysts look at the combination of the following three elements:

- **Food availability:** Food must be available in sufficient quantities and on a consistent basis. It considers stock and production in a given area and the capacity to bring in food from elsewhere, through trade or aid.
- **Food access:** People must be able to regularly acquire adequate quantities of food, through purchase, home production, barter, gifts, borrowing or food aid. Physical access to markets is a second important dimension, which can often be interrupted in times of conflict or after climate-related disasters.

- **Food utilization:** Consumed food must have a positive nutritional impact on people. It entails cooking, storage and hygiene practices, individuals' health, water and sanitation, feeding and sharing practices within the household.

As the leading humanitarian organization providing food and food-related assistance in emergencies and working with communities to improve nutrition and build resilience, it is the priority of the World Food Programme to achieve Sustainable Development Goal 2 – Zero Hunger by 2030. Every day, WFP and its partners work to bring us closer to a zero-hunger world. With our humanitarian food assistance, we provide nutritious food to those in urgent need; in parallel, an integrated set of disaster risk reduction and climate change adaptation programmes help to strengthen the longer-term resilience of communities so people do not remain caught in a vicious cycle of aid dependency.

GH: How many people around the world are chronically dependent for survival on food provided by the United Nations and other NGO's?

GL: The number of under-nourished people in the world has increased to nearly 821 million in 2017. Last year, the United Nations World Food Programme has delivered assistance to 91.4 million people in 83 countries, responding especially to crisis levels of acute food insecurity. In 2017, almost 124 million people across 51 countries and territories have faced such crisis levels, requiring immediate emergency action to safeguard their lives and preserve their livelihoods. This represents an increase compared to 2015 and 2016, when 80 and 108 million people, respectively, were reported as facing crisis levels of food insecurity.

GH: How much has the need to feed hungry people grown in just the past decade, and is that trend likely to lessen or expand even more as time goes on?

GL: The number of people who suffer from hunger has been growing over the past three years, returning to levels from almost a decade ago. According to [The State of Food Security and Nutrition in the World 2018 report](#), the absolute number of undernourished people in the world is now estimated to have increased to nearly 821 million in 2017, from around 804 million in 2016. The situation is worsening in South America and most regions of Africa, while the decreasing trend in undernourishment that characterized Asia seems to be slowing down significantly.

The main drivers behind this uptick in hunger are conflict and climate change. The world has already warmed by 1°C above pre-industrial levels, which is impacting migration, conflict and food security. Further warming beyond 1.5 °C is projected to lead to a higher risk of food shortages in the Sahel, southern Africa, the Mediterranean, central Europe and the Amazon region. [A WFP research project has calculated](#) that in a 2°C warmer world, 189 million people

more than today could experience higher risks of food insecurity. A world that is 4°C warmer is projected to have 1.8 billion people more vulnerable.

GH: You have reported that Africa and Asia are where the hot spots of food security are located. Why it is such a big problem on those continents?

GL: Conflict is one of the main causes of food insecurity and hunger globally today, forcing millions of people to abandon their land, homes and jobs and putting them at risk of hunger. Much of the recent increase in food insecurity can be traced to the greater number of conflicts, which are in turn often exacerbated by climate-related shocks and extremes. Even in settings without violent conflict, food security can deteriorate as economic slowdowns and more frequent and intense climatic extremes challenge access to food, availability of food, and the stability of agricultural value chains.

In 2017, Africa was the region where climate shocks and stressors had the biggest impact on acute food insecurity and malnutrition, affecting 59 million people in 24 countries and requiring urgent humanitarian action. The influence of climate on production and livelihoods is strongest and most complex on the continent, with drought events being responsible for the bulk of losses and damages in the agriculture sector. This vulnerability stems from mostly rain-fed dryland farming, and sensitive agro-pastoral systems that are the primary livelihood for 70 – 80 percent of the continent’s rural population.

Asia is the region with the biggest and most varied landmass, the greatest aggregations of humans in exposed settings (such as coastal megacities), and the highest occurrence of floods and storm-related disasters. Additionally, there are a number of refugee situations in the region – such as the Rohingya crisis at the border between Myanmar and Bangladesh - that drive up the numbers of hungry people.

GH: The world’s human population has doubled to more than 7.6 billion just since 1970. How much of a link is there between the growth in human numbers and food insecurity?

GL: During the second half of the twentieth century, global food availability and access developed rapidly enough to keep abreast of population growth. As a result, many countries have improved their food security and made impressive achievements in reducing hunger and malnutrition by 2015. While the global population has steadily increased, there has been consistent progress in reducing the prevalence (the proportion of the population affected) of undernourishment in the world. In 2005, 14.5 percent of the world’s population were chronically undernourished, which reached a low of 10.7 percent in 2014, with a slight increase in the last two years to an estimated value of 10.9 percent in 2017. However, the trend over the

past three years provides reasons for concern. At the moment, we are facing a dramatic increase in the number of hungry people, returning to levels from almost a decade ago. This increase cannot be attributed to population growth, but reflects patterns of more violent conflicts and more frequent and intense climate extremes.

GH: Can you talk about the consequences of climate change that make it a major factor driving hunger and water insecurity around the world?

GL: Climate change exacerbates the risks of hunger and undernutrition through more frequent and intense extreme **weather events**. This has an adverse impact on livelihoods and food security. Climate-related disasters have the potential to destroy crops, critical infrastructure, and key community assets, therefore deteriorating livelihoods and exacerbating poverty. A second way in which climate change impacts food and water insecurity is through **longer-term and more gradual risks**. Sea-levels will rise as a result of climate change, affecting livelihoods in coastal areas and river deltas. Accelerated glacial melt will affect the quantity and reliability of water available in many mountainous countries and downstream river basins, and change patterns of flooding and drought. In this way, climate change will affect all dimensions of food security and nutrition:

- **Food availability:** Changes in climatic conditions have already affected the production of some staple crops, and future climate change threatens to exacerbate this. Higher temperatures will have an impact on agricultural yields while changes in rainfall could affect both crop quality and quantity.
- **Food access:** Climate change is projected to increase the prices of major crops in some regions. For the most vulnerable people, lower agricultural output means lower incomes. Under these conditions, the poorest people — who already use most of their income on food — sacrifice additional income and other assets to meet their nutritional requirements, or resort to poor coping strategies.
- **Food utilization:** Climate-related risks affect calorie intake, particularly in areas where chronic food insecurity is already a significant problem. Changing climatic conditions could also create a vicious cycle of disease and hunger. Nutrition is likely to be affected by climate change through related impacts on food security, dietary diversity, care practices and health.
- **Food stability:** The climatic variability produced by more frequent and intense weather events can upset the stability of individuals' and government food security strategies, creating fluctuations in food availability, access and utilization.

GH: There are places now like Syria and Yemen, where violent conflict is causing massive numbers of refugees facing thirst and hunger. What are the factors driving food insecurity in these countries, and how do we moderate them?

GL: In Syria, a large-scale drought between 2006 and 2010 has affected 1.3 million people, accelerated rural migration to cities, compounding other stresses and sources of tension that led to civil unrest and eventually conflict. This year, extreme weather, such as drought, and the prolonged conflict have caused agricultural production to hit its lowest point in three decades. The conflict has damaged vast farming areas, displaced thousands of farmers and triggered sharp increases in the cost of seed and fertiliser. The FAO/WFP Crop and Food Security Assessment Mission (CFSAM) reported in October that though the number of food-insecure people in Syria has decreased, continued food assistance is vital. Syrians returning to their country and communities need active markets, jobs and support. WFP is helping Syrians produce their own food and generate an income through livelihoods projects in areas that are secure and have working markets. WFP aims to focus on rehabilitating agricultural community assets, such as damaged water systems.

The food security crisis in Yemen is mostly man-made. It is the result of conflict, economic collapse, rising prices, and problems of supply and distribution. Many food items are beyond the reach of most Yemenis. The value of the Yemeni Riyal has halved since July. The price of most basic food items has increased by more than 30 percent in just four months. More than half a million jobs have been lost since the beginning of the conflict and an estimated 1.2 million government employees have not received their salaries for more than two years. WFP joins the call for emergency measures, by Yemen's Central Bank and in partnership with international financial institutions such as the IMF, to stabilize prices and rebuild Yemenis' capacity to secure the basics of life. WFP is advocating for the immediate unfreezing of public salaries to begin restoring badly eroded livelihoods.

GH: As a global human society, too often those of us who are well off take an 'out of sight, out of mind' attitude toward people who are struggling to survive. How could that indifference come back to haunt us?

GL: Conflict undoubtedly leads to the breakdown of food security, and it is easy to put some emotional distance between oneself and a war on another continent. That said, there is evidence that climate-related shocks compound conflict and exacerbate tensions in many volatile regions around the world. And these shocks, in turn, get more frequent and intense in a changing climate. If the international community does not address the root causes of hunger and the impacts that climate change is having on food security, there will be more conflict over climate-sensitive natural resources, such as land and water, and more forced displacement. The

countries with the highest exodus of refugees are those with high or increasing levels of food insecurity and armed conflict. In addition, countries where climate shocks and conflict intersect have some of the highest rates of malnutrition. To ensure a stable and prosperous world, more decisive climate action is required to break the cycle of conflict and climate degradation that is threatening food security and development gains across much of the planet. Such climate action needs to focus on the parallel strands of climate change mitigation (i.e. the reduction of greenhouse gas emissions), climate change adaptation, and climate finance to support those countries that are in the most vulnerable situations.

GH: What are the core strategies adopted by the UN World Food Programme to address hunger in the years ahead?

GL: Responding to emergencies and saving lives and livelihoods – directly and by strengthening country response capacities – are paramount and will remain the major part of WFP’s operations in the years to come. This is crucial to supporting countries’ efforts to achieve the SDGs. However, ending hunger remains a significant global challenge. Ending hunger must be achieved in the context of increasingly complex and protracted humanitarian needs. Conflict, climate change and growing inequality amplify these challenges, disrupting food systems, economies and societies as well as increasing people’s vulnerability. Current trends point to continued disruption over the medium term.

Against this backdrop, WFP’s Strategic Plan (2017-2021) focuses on the following strategic goals, objectives and results:

Strategic Goal 1: Support countries to achieve zero hunger (SDG 2)

- **Strategic Objective 1:** End hunger by protecting access to food
- **Strategic Objective 2:** Improve nutrition
- **Strategic Objective 3:** Achieve food security

Strategic Goal 2: Partner to support implementation of the SDGs (SDG 17)

- **Strategic Objective 4:** Support SDG implementation
- **Strategic Objective 5:** Partner for SDG results

GH: What are some things citizens of the more developed nations can do to help moderate the growing number of refugees and hunger in distressed places as time goes on?

GL: Citizens can hold their governments accountable to the commitments made at the UN Climate Conference in Paris to limit global warming well below 2°C, with the aim of limiting it to 1.5°C. Limiting warming to this level will reduce the future risk of food shortages in many parts of the world, including current hot-spots for hunger such as the Sahel and the Horn of Africa. Citizens should also advocate for continued support and predictable, long-term funding to help developing countries achieve the Sustainable Development Goals that will enable the world to end poverty and hunger, fight inequality, promote gender equality and women's empowerment, and fight climate change.

Gernot Laganda is the Chief of the Climate Change and Disaster Risk Reduction Programmes for the United Nations World Food Programme (WFP). He coordinates the world's largest program to strengthen the resilience of smallholder farmers in developing countries to the effects of global warming. A geoscientist by training, Gernot has spent the past 16 years managing projects and programs at the intersection of rural development and disaster risk management. He held posts with Hilfswerk Austria International, an NGO supporting disaster relief and reconstruction projects in Afghanistan and Tajikistan; the Austrian Development Agency, a bilateral aid agency in his native Austria; and the United Nations Development Program (UNDP) in South Africa. Prior to joining IFAD, Gernot was based in Bangkok where he served as Technical Advisor for Climate Change Adaptation in UNDP's regional office for Asia and the Pacific. In this capacity, he provided advisory services to a wide range of governments – from countries experiencing glacial melting in the Himalayas, to Small Island States threatened by sea level rise - on how to mobilize and program different sources of financing for more effective climate risk management. Gernot holds a M.Eng. degree in applied geosciences, a master's degree in public policy and management, and postgraduate diplomas in disaster management and development cooperation.

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