The 2020 Nobel Peace Prize rewards the persistent vision of a world without hunger, famine, or malnutrition

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Why did the UN World Food Programme (WFP) receive the 2020 Nobel Peace Prize? And what does that have to do with nutrition? The answer to both questions is embedded in renewed concerns globally about food insecurity.

During 2020, this strangest of years, food has emerged as an important narrative shadowing COVID-19 at every step. During the early months of the pandemic, the focus of much attention was on the effects on food supply chains of lockdown rules brought in to control viral spread (1). Supermarket shelves were quickly emptied of basics, like bread flour and yeast, canned soups, and long-lasting milk as panic buying and hoarding outpaced commercial resupply. Soon, consumers began to worry about access to fresh produce, as farm and packing workers' movement was restricted and agricultural input supplies could not be transported in time for spring planting and late summer harvests. Restaurants, school meals, fast-food vendors, and institutional canteens all closed, leaving food producers who specialize in such outlets for the sale of products and services facing vanishing demand (2). Lost employment and income across a broad spectrum of jobs also greatly impacted consumer purchasing power. This led to a sharp contraction in intake by many households of the nutrient-rich foods that should underpin a healthy diet (3).

This sequence of events hit most nations hard. In the United States, for instance, the rate of children's food insufficiency as estimated by the USDA grew from a national average of 17.4% of households in early June 2020, to ∼20% by the end of July (4). Similarly, it was projected in May 2020 that if conditions in the United States did not improve quickly, the number of people experiencing food insecurity by the end of the year would increase by >17 million, including ∼7 million children (5).

But this crisis was not restricted to the United States or other high-income countries; this has been a shared global phenomenon. From Nicaragua to Nigeria and Nepal, livelihoods were suddenly on the line. There has been a strong sense that food security now faces new and dangerous threats that particularly affect the poorest households during lockdown and smallholder farms relying on smoothly functioning food supply chains (6). Where low-income families already use the bulk of their limited resources for acquiring food, it is the quality and quantity of diets that are among the first casualties of any emergency (7). As in so many previous crises, relatively more expensive nutrient-rich foods become a luxury for millions of people who sacrifice them to protect a minimum quantity of cheap calories (8, 9). Before COVID-19 turned the world upside down, it was estimated that 3 billion of the planet's 7.7 billion people already could not afford a healthy diet (at prevailing local prices), and were therefore subsisting on suboptimal diets (10, 11). Although no firm data are yet available, that number can only have risen since. The picture is similar across the world: in Nigeria, "prices of food items continued their marked upward surge of the past few months as a result of … disruptions to the supply chain due to the restrictive measures implemented to contain the COVID-19 pandemic"; in Kyrgyzstan food prices sharply increased in 2020 "following an upsurge in consumer demand due to concerns over the COVID-19 pandemic and export limitations in Kazakhstan, the country's key supplier"; whereas Bangladesh saw food prices rising to be 25% over the previous year due to a "surge earlier in the year in response to strong demand amid the COVID-19 pandemic" (12). Where food prices have risen and incomes have fallen, an increase in hunger and malnutrition is no surprise.

Hunger is a nebulous concept that conveys a difficult-to-measure sense of insufficiency coupled with inequity, growing anguish, pain, and fear of the future (13, 14). The UN tries to capture this morally unacceptable reality by tallying up the total quantity of food in a country, converting that to kilocalories, and assessing how many people might not be able to afford even a minimally adequate diet on a daily basis—a measure called "chronic undernutrition" (which is used as a proxy for "hunger")

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(13). Although the number of the world's people classified as hungry fell steadily between 2005 and 2014 (from 826 million to 629 million), a reversal has been reported since then. Because of armed conflicts, drought, locusts, and political instability in various parts of Africa, the Gulf region, and Asia, the number had climbed back up to 688 million by 2019, prepandemic (10).

Famine is sadly all too easy to understand and measure (in relation to people dead or dying of the diseases and severe malnutrition associated with an extreme lack of food). Although the ancient scourge of famine had disappeared for a decade or two, by 2017 it had reared its ugly head again in parts of Africa, as well as in Yemen (15). Fears were widely expressed that the COVID-19 pandemic could accelerate and amplify these trends. In April 2020, the head of the WFP made a statement to the UN Security Council in which he proclaimed that the world faced "a hunger pandemic as COVID-19 spreads"; he went on to argue that "in a worst-case scenario, we could be looking at famine in about three dozen countries, and in fact, in 10 of these countries we already have more than one million people per country who are on the verge of starvation" (16).

Humanitarian needs rose steadily in the past decade, largely because of a growing scale of tragedy associated with armed conflict; in 2018, there were 128 separate state or nonstate conflicts contributing to an estimated $1.2 trillion in economic losses (17, 18). In conflict-affected countries across sub-Saharan Africa, the number of undernourished people increased by ~23 million between 2015 and 2018, and at a faster rate compared with countries not exposed to conflict (19). But large-scale need is also underpinned by natural disasters, political instability, locusts, and other pests and diseases. By the end of 2019, the amount of humanitarian aid requested through UN appeals had reached almost $30 billion for responding to the immediate needs of 135 million people in 55 countries (20, 21). In other words, the pandemic emerged on a global stage already crowded with people facing serious health risks, many of which were associated with suboptimal diets, often in locations where the fabric of society was already frayed.

No-one suggests that dietary factors are the only risks associated with nutrition or health outcomes; smoking, alcohol abuse, lack of physical activity, and inequities in incomes, access to healthcare, education, and legal protections, all play crucially important roles. It is a combination of such factors that appears to have raised risk of exposure to the coronavirus through low-paid employment, crowded housing, lack of health insurance, low educational attainment, and more.

Whereas the typical national policy responses to COVID-19, including restrictions on personal movement, the closing of international borders, and the closing of factories had immediate impacts on incomes, the disease itself brought unanticipated diet-related health outcomes into the spotlight. Higher than average hospitalization rates and mortality risks appear to be associated with a wide range of underlying conditions, including obesity and related noncommunicable diseases (NCDs) such as diabetes and heart disease. The WHO and the UN Development Programme have stated the following: *1*) obesity increases the risk of becoming severely ill from COVID-19; *2*) people with diabetes were 3 times more likely to have severe symptoms or die from COVID-19; and *3*) hypertension and cardiovascular and cerebrovascular disease increased the odds for severe COVID-19 by 2.3, 2.9, and 3.9 times, respectively (22).

The role of NCDs in shaping this pandemic is of global concern. Diabetes, high blood pressure, heart disease, and high cholesterol are all major diet-related problems manifest in low-, middle-, and high-income countries. Rapid poverty reduction (rising disposable income across much of the world), coupled with aggressive retail marketing and easier access to ultraprocessed foods and sugar-sweetened beverages, have combined to make obesity a worldwide concern, including in remoter rural regions of Africa and Asia (23). At the same time, chronic diseases compound the continuing burden of infectious disease in large parts of the world such that for Type II diabetes alone, the projected annual economic cost to East Asia and the Pacific region is expected to reach almost $800 billion by 2030 (assuming present trends), and $52 billion in sub-Saharan Africa (24). In other words, the health challenges associated at least in part with suboptimal diets have become universal. A solution to hunger and malnutrition in all its forms cannot, therefore, be found just through calories. The quality of diet overall must become a priority policy concern for all nations. This means reshaping national policies, health agendas, and consumer demand patterns to embrace local availability and affordability of diverse, nutrient-rich foods that are culturally appropriate and safe for the consumer.

In terms of food safety, the likelihood that COVID-19 is a zoonosis associated with food(s) transacted in informal markets in Asia has led to enhanced scrutiny of food safety laws and regulations as well as trade flows. Disease spillovers to humans (including those associated with HIV/AIDS, Ebola, and influenza A H1N1), often happen where hunted or trapped wildlife enters the human diet, and/or where wildlife host and human habitats start to overlap (25). In other words, the likelihood of transmission either through touch or taste increases where reservoir hosts or carriers of the disease come into close contact with people. This happens where logging, mining, and other economic activities disturb forest margins and disrupt local ecosystems.

It has been estimated that smallholder farms produce roughly one-third of the world's food (26). Often unable to sustainably intensify their productivity (output per unit of input, or of land area cultivated) they frequently augment their crop and animal production by expanding into less agriculturally fertile lands. Many of these people live in already environmentally fragile contexts that are prone to natural disasters, price shocks, and/or conflict. A recent analysis by a Swiss-based insurance company that focuses on natural disasters found that one-fifth (20%) of the world's countries are at risk of ecosystem collapse this century, with nations most heavily dependent on agriculture facing the most serious challenges, including Nigeria, Kenya, and South Africa (27). Thus, the food systems on which we all depend are increasingly stressed by natural resource depletion, urban encroachment, loss of biodiversity, and the temperature, rainfall, and storm anomalies associated with climate change. In turn, the ways in which we produce, procure, and prioritize foods for our meals have significant impacts on us and on the planet.

Although it is far too early to assess the lasting economic and societal damage wrought by this pandemic, the World Bank (28) estimated in June that COVID could push 70 to 100 million more

people into extreme poverty by the end of the year. Similarly, the UN projected a doubling during 2020 in the number of people facing severe food insecurity worldwide (taking the total to >265 million) (16). What is more, child wasting (children aged 6–59 mo being too thin relative to their height, which significantly increases mortality risks) is expected to rise both because of food insecurity and reduced access to healthcare. One recent modeling exercise considered an increase in wasting from 10% to 50% alongside a 10% to 50% reduction in access to life-saving healthcare services; the worst-case scenario among those tested resulted in >1 million additional preventable child deaths by the end of 2020 (29).

It is in this context that the Nobel Peace Prize committee concluded that tackling hunger and malnutrition, especially in the context of COVID-19, represents a worthy cause, and that the WFP is a worthy champion of that cause. WFP was awarded the Peace Prize in recognition of its persistent dogged determination in the face of many odds to ensure that as few people as possible go without food. Operating since 1963, WFP is the world's largest humanitarian relief and development organization. It has evolved from primarily shipping and delivering food aid in-kind (i.e., as food to refugees, displaced people, at-risk children, etc.), to using a wide toolkit that includes cash, vouchers, and electronic bank transfers as means of supporting the income and food intake of vulnerable populations. The agency also procures and delivers specialized nutritious food products (such as lipid-based ready-to-use-foods, high-energy biscuits, and micronutrient-fortified flour blends to be made into porridge) to treat and prevent child wasting and stunting, and to protect the nutritional status of pregnant and lactating women. In 2019, WFP operated in 88 countries reaching roughly 100 million vulnerable people with food-related assistance of various kinds, based on donor contributions of $8 billion (30).

In awarding the Peace Price, the Norwegian Nobel Committee praised WFP's "impressive ability to intensify its efforts" in the context of the pandemic (31). The Committee also noted that a commitment to resolving hunger and malnutrition is an important contribution to peace: "providing assistance to increase food security not only prevents hunger, but can also help to improve prospects for stability and peace. […] an endeavour that all the nations of the world should be able to endorse and support" (31).

Thus, the prize went to an ideal; one that is made concrete by the actions of thousands of WFP staff who risk their lives every year for the sake of making the world a better place. But we all have a role in this agenda. Bringing an end to hunger and malnutrition is everyone's business. We must demand more of our food systems. We need to reshape food systems in ways that make them more resilient to shocks, more inclusive and sustainable, but also ensure that their fundamental purpose is not just to feed people, but to nourish everyone. We must be active in defining what foods should be produced and how, find ways to reduce cost and minimize waste, and become engaged stakeholders to inform, educate, and influence all consumers to support more informed dietary choices. We have to create a new vision of how our food systems can be both sustainable *and* sustaining. And we must hold governments and commercial companies responsible for policy and investment decisions that run counter to such collective goals. None of this is easy, but it is certainly possible. Transforming our food systems into something that promotes, rather than hinders, nutrition and health is surely a goal worth pursuing.

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References

1. Laborde D, Martin W, Swinnen J, Vos R. COVID-19 risks to global food security. Science 2020;369(6503):500–2.
2. Steavenson W. Covid-19 has exposed the world's fragile, complex food supply chains. Financial Times. 2020 Sept 24; 1–8.
3. Global Panel on Agriculture and Food Systems for Nutrition. Future food systems: for people, our planet and prosperity [Internet]. London, UK; 2020 [cited October 23, 2020]. Available from: https://www.glopan.org/foresight2/
4. USDA Economic Research Service. Rates of child food insufficiency, 2020 [Internet]. Washington (DC); 2020 [cited October 12, 2020]. Available from: https://www.ers.usda.gov/data-products/chart-gallery/gallery/chart-detail/?chartId=99189
5. Hake M, Dewey A, Engelhard E, Gallagher A, Summerfelt T, Malone-Smolla C, Maebry T, Gundersen C. The impact of the coronavirus on local food insecurity [Internet]. Washington (DC): May 19, 2020; Feeding America [cited October 1, 2020]. Available from: https://www.feedingamerica.org/sites/default/files/2020-05/Brief_Local%20Impact_5.19.2020.pdf
6. High Level Panel of Experts on Food Security and Nutrition (HPLE). Impacts of COVID-19 on food security and nutrition: developing effective policy responses to address the hunger and malnutrition pandemic [Internet]. HPLE Issues Paper. Rome, Italy: Committee on World Food Security; September 2020 [cited October 13, 2020]. Available from: http://www.fao.org/3/cb1000en/cb1000en.pdf
7. Bai Y, Alemu R, Block SA, Headey D, Masters WA. Cost and affordability of nutritious diets at retail prices: evidence from 177 countries. Food Policy [Internet] 2020. Available from: https://doi.org/10.1016/j.foodpol.2020.101983
8. de Pee S, Brinkman H-J, Webb P, Godfrey S, Darnton-Hill I, Alderman H, Semba R, Piwoz E, Bloem M. How to ensure nutrition security in the global economic crisis. J Nutr 2010;140(1):138S–42S.
9. Cardwell R, Ghazalian PL. COVID-19 and international food assistance: policy proposals to keep food flowing. World Dev 2020;135:105059.
10. FAO, IFAD, UNICEF, WFP, WHO. The state of food security and nutrition in the world 2020. Transforming food systems for affordable healthy diets [Internet]. Rome; 2020 [cited October 13, 2020]. Available from: https://doi.org/10.4060/ca9692en
11. United Nations. 2019 revision of world population prospects [Internet]. New York: Department of Economic and Social Affairs, Population Division; 2019. Report no. ST/ESA/SER.A/423 [cited October 1, 2020]. Available from: https://population.un.org/wpp/Publications/Files/WPP2019_Volume-I_Comprehensive-Tables.pdf
12. Food and Agriculture Organization. Food Price Monitoring and Analysis (FPMA) Bulletin #8, October 13, 2020. Rome, Italy: FAO; 2020.
13. Webb P, Stordalen G, Singh S, Wijesinha-Bettoni R, Shetty P, Lartey A. Hunger and undernutrition in 21st century. BMJ [Internet] 2018;361:k2238. doi: https://doi.org/10.1136/bmj.k2238.
14. Webb P, Coates J, Frongillo E, Rogers B, Swindale A, Bilinsky P. Measuring household food insecurity: why it's so important and yet so difficult to do. J Nutr 2006;136:1404S–8S.
15. Global Panel on Agriculture and Food Systems for Nutrition. Strengthening food systems in fragile contexts. Policy Brief No. 15 [Internet]. London, United Kingdom: 2020 [cited October 14, 2020]. Available from: https://www.glopan.org/wp-content/uploads/2020/08/10989%E2%80%A2Fragile-Context-Policy-Brief_WEB3.pdf
16. Beasley D. WFP chief warns of hunger pandemic as COVID-19 spreads. Statement to UN Security Council [Internet]. UN World Food Programme; 2020 [cited September 14, 2020]. Available from: https://www.wfp.org/news/wfp-chief-warns-hunger-pandemic-covid-19-spreads-statement-un-security-council

17. Strand H, Rustad SA, Urdal H, Nygård HM. Trends in armed conflict, 1946–2018. Conflict Trends [Internet] 2019;3. Available from: https://www.prio.org/utility/DownloadFile.ashx?id=1858&type=publicationfile
18. United Nations Office for the Coordination of Humanitarian Affairs. World humanitarian data and trends 2018. New York; 2018.
19. FAO, UNICEF, WFP, WHO. The state of food security and nutrition in the world: safeguarding against economic slowdowns and downturns. Rome, Italy; 2019.
20. United Nations Office for the Coordination of Humanitarian Affairs. Global humanitarian overview 2020. New York; 2020.
21. Food Security Information Network and Global Network Against Food Crises. Global report on food crises 2020 September update [Internet]. Rome, Italy; 2020 [cited October 13, 2020]. Available from: https://www.fsinplatform.org/sites/default/files/resources/files/GRFC2020_September%20Update_0.pdf
22. World Health Organization/United Nations Development Programme. COVID-19 and NCD risk factors. Briefing note [Internet]. Geneva, Switzerland; 2020 [cited September 15, 2020]. Available from: https://www.who.int/docs/default-source/ncds/un-interagency-task-force-on-ncds/uniatf-policy-brief-ncds-and-covid-030920-poster.pdf?sfvrsn=b8c946fa_4
23. NCD Risk Factor Collaboration (NCD-RisC). Rising rural body-mass index is the main driver of the global obesity epidemic in adults. Nature 2019;569:260–4.
24. Afshin A, Sur PJ, Fay KA, Cornaby L, Ferrara G, Salama JS, Mullany EC, Abate KH, Abbafati C, Abebe Z, et al. Health effects of dietary risks in 195 countries, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017. Lancet 2019;393(10184):1958–72.
25. Guégan J-F, Ayouba A, Cappelle J, de Thoisy B. Forests and emerging infectious diseases: unleashing the beast within. Environ Res Lett [Internet] 2020;15:083007. doi: https://doi.org/10.1088/1748-9326/ab8dd7.
26. Ricciardi V, Ramankutty N, Mehrabi Z, Jarvis L, Chookolingo B. How much of the world's food do smallholders produce? Glob Food Sec 2018;17(6):64–72.
27. Retsa A, Schelske O, Wilke B, Rutherford-Liske G, de Jong R. Biodiversity and ecosystem services: a business case for re/insurance. Zurich, Switzerland: Swiss Reinsurance Company Ltd; 2020.
28. World Bank. Global economic prospects [Internet]. Washington (DC); June 2020 [cited September 27, 2020]. doi: https://www.doi.org/10.1596/978-1-4648-1553-9
29. Roberton T, Carter ED, Chou VB, Stegmuller AR, Jackson BD, Tam Y, Sawadogo-Lewis T, Walker N. Early estimates of the indirect effects of the COVID-19 pandemic on maternal and child mortality in low-income and middle-income countries: a modelling study. Lancet [Internet] 2020;8(7):E901–8. Available from: https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(20)30229-1/fulltext
30. World Food Programme. Annual performance report for 2019. Agenda Item 4/Report No. WFP/EB.A/2020/4-A for the Executive Board, Annual session [Internet]. Rome, Italy; 2020 [cited October 10, 2020]. Available from: https://docs.wfp.org/api/documents/WFP-0000115522/download/?_ga=2.14867894.1499786286.1603147621-901462129.1603147621
31. Norwegian Nobel Committee. Announcement: the Nobel Peace Prize for 2020 [Internet]. Oslo: The Nobel Prize; October 2020 [cited October 1, 2020]. Available from: https://www.nobelprize.org/prizes/peace/2020/press-release/