

Modeling COVID-19 nutrition impacts in LMIC to support global & national advocacy

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<http://www.standingtogetherfornutrition.org>

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The state of global nutrition

Progress towards the global nutrition targets is too slow and deeply unfair. Global patterns hide significant inequalities between and within countries

Maternal, infant and young child nutrition targets



Anaemia

In 2016, anaemia affected **613.2 million** women of reproductive age, **35.3 million** of whom were pregnant.

OFF COURSE



Exclusive breastfeeding

In 2018, **42.2%** of infants 0–5 months were exclusively breastfed.

SOME PROGRESS



Low birth weight

The latest estimate (2015) is that there are around **20.5 million** children with low birth weight.

SOME PROGRESS



Childhood stunting

In 2018, **149.0 million** children were stunted.

OFF COURSE



Childhood wasting

In 2018, **7.3%** of children were wasted, equivalent to **49.5 million** children.

OFF COURSE



Childhood overweight

In 2018, **5.9%** of children were overweight, equivalent to **40.1 million** children.

OFF COURSE

April 2020: origins of *Standing Together for Nutrition Consortium*

"We are facing an unprecedented crisis of global hunger and malnutrition due to COVID19. Failure to act now will result devastating long-term consequences. Nutrition, health and food systems experts from around the world have joined forces in Standing Together for Nutrition to prevent this from happening."

DR. SASKIA OSENDARP
Micronutrient Forum

STANDING TOGETHER
FOR NUTRITION

Join us at StandingTogetherForNutrition.org



**Micronutrient
FORUM**



IFPRI



WORLD BANK



JOHNS HOPKINS
BLOOMBERG SCHOOL
of PUBLIC HEALTH



gain

Global Alliance for
Improved Nutrition



& 600+ signatories



OVERALL ST4N GOAL

Increase funding for COVID-19 related nutrition and increase effectiveness of COVID-19 response and recovery programming and policy.

ADVOCACY OBJECTIVES

For ST4N to be a credible, trusted voice, and source on the impact of COVID-19 on malnutrition and actions required

ST4N evidence, aligned with other data and projections, leads to action from multiple stakeholders

July 2020: Call to Action signed by 4 UN Agency Heads

Lancet July 2020

Child malnutrition and COVID-19: the time to act is now

The COVID-19 pandemic is undermining nutrition across the world, particularly in low-income and middle-income countries (LMICs).¹ The worst consequences are borne by young children. Some of the strategies to respond to COVID-19—including physical distancing, school closures, trade restrictions, and country lockdowns—are impacting food systems by disrupting the production, transportation, and sale of nutritious, fresh, and affordable foods, forcing millions of families to rely on nutrient-poor alternatives. Strained health systems and interruptions in humanitarian response are eroding access to essential and often life-saving nutrition services.² Social protection systems in many LMICs are overloaded as vulnerable families struggle to access the food and services they need in the context of an economic downturn.

Malnutrition could exacerbate the effects of COVID-19 in mothers and children. At the same time, more children are becoming malnourished due to the deteriorating quality of their diets, interruptions in nutrition and other essential services, and the socioeconomic shocks created by the pandemic in LMICs. New estimates by Derek Headey and colleagues³ in an accompanying Comment in *The Lancet* suggest that without timely action, the global prevalence of child wasting could rise by a shocking 14-3%. With an

estimated 47 million children younger than 5 years affected by wasting globally before the COVID-19 pandemic,⁴ this would translate to an estimated additional 6-7 million children with wasting during the first 12 months of the pandemic—80% of them in sub-Saharan Africa and south Asia—and more than 10 000 additional child deaths per month during this same period.³

With services for the prevention and treatment of wasting to a large extent up-ended in LMICs, millions of children are at risk of not receiving the care they need to survive and thrive. UNICEF reports from the early months of the COVID-19 pandemic suggest a 30% reduction in the coverage of essential nutrition services in LMICs and declines of 75-100% under lockdown contexts.³ Our agencies estimate that a minimum of US\$2.4 billion is needed immediately to protect these children, and to prevent and treat malnutrition, and avoid the US\$2.4 billion estimate includes an essential set of four life-saving interventions: prevent malnutrition in children at risk; treatment for acute malnutrition; biannual vitamin A supplementation for children aged 6-59 months (90% coverage); and communication for the protection, promotion, and support of breastfeeding that focuses on the support of families of children aged 0-23 months.



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See Comment page 519



Panel: Five urgent actions to protect children's right to nutrition in the COVID-19 pandemic

- Safeguard and promote access to nutritious, safe, and affordable diets
- Invest in improving maternal and child nutrition through pregnancy, infancy, and early childhood
- Re-activate and scale up services for the early detection and treatment of child wasting
- Maintain the provision of nutritious and safe school meals for vulnerable children
- Expand social protection to safeguard access to nutritious diets and essential services

Impacts of COVID-19 on childhood malnutrition and nutrition-related mortality



The unprecedented global social and economic crisis triggered by the COVID-19 pandemic poses grave risks to the nutritional status and survival of young children in low-income and middle-income countries (LMICs). Of particular concern is an expected increase in child malnutrition, including wasting, due to steep declines in household incomes, changes in the availability and affordability of nutritious foods, and interruptions to health, nutrition, and social protection services.¹

One in ten deaths among children younger than 5 years in LMICs is attributable to severe wasting because wasted children are at increased risk of mortality from infectious diseases.² Before the COVID-19 pandemic, an estimated 47 million children younger than 5 years were moderately or severely wasted, most living in sub-Saharan Africa and south Asia.³

The economic, food, and health systems disruptions resulting from the COVID-19 pandemic are expected to continue to exacerbate all forms of malnutrition. Estimates from the International Food Policy Research Institute suggest that because of the pandemic an additional 140 million people will be thrown into living in extreme poverty on less than US\$1.90 per day in 2020.⁴ According to the World Food Programme, the number of people in LMICs facing acute food insecurity will nearly double to 265 million by the end of 2020.⁵ Sharp declines are expected in access to child health and nutrition services, similar to those seen during the 2014–16 outbreak of Ebola virus disease in sub-Saharan Africa.⁶ Early in the COVID-19 pandemic, UNICEF estimated a 30% overall reduction in essential nutrition services coverage, reaching 75–100% in lockdown contexts, including in fragile countries where there are humanitarian crises.⁷

The accompanying call to action on child malnutrition and COVID-19 from leaders of four UN agencies⁸ in *The Lancet* is an important first step for the international community. Alongside these efforts, the Standing Together for Nutrition consortium, a multidisciplinary consortium of nutrition, economics, food, and health systems researchers, is working to estimate the scale and

reach of nutrition challenges related to COVID-19. These efforts link three approaches to model the combined economic and health systems impacts from COVID-19 on malnutrition and mortality: MIRAGRODEP's macroeconomic projections of impacts on per capita gross national income (GNI);⁴ microeconomic estimates of how predicted GNI shocks impact child wasting using data on 1.26 million children from 177 Demographic Health Surveys (DHS) conducted in 52 LMICs between 1990–2018,⁹ and the Lives Saved Tool (LUST), which links country-specific health services disruptions and predicted increases in wasting to child mortality.¹⁰

What do our initial analyses and estimates suggest? First, the MIRAGRODEP projections suggest that even fairly short lockdown measures, combined with severe mobility disruptions and comparatively moderate food systems disruptions, result in most LMICs having an estimated average 7.9% (SD 2.4%) decrease in GNI per capita relative to pre-COVID-19 projections.⁴

Second, the microeconomic model projections indicate that decreases in GNI per capita are associated with large increases in child wasting.¹ Our own analyses, based on these estimates applied to 118 LMICs, suggest there could be a 14.3% increase in the prevalence of moderate or severe wasting among children younger than 5 years due to COVID-19-related predicted

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3 Posts ↑ 95 New Updates

10:38 p.m. ET, July 27, 2020

Nearly 7 million more children could suffer from acute malnutrition due to Covid-19 pandemic, analysis says 29 Jul 2020

From CNN's Gisela Crespo

Nearly 7 million more children worldwide could suffer from acute malnutrition due to the impact of the Covid-19 pandemic, according to an analysis published Monday in the Lancet medical journal.

Disruptions in mobility and food systems caused by even relatively short lockdowns will result in a decrease of nearly 8% of gross national income (GNI) per capita compared to pre-pandemic projections.

The New York Times
11 Sep 2020



28 Jul 2020



COVID-19 | Published July 28

Coronavirus leads to mass hunger, killing 10,000 children a month, UN warns

UNICEF: 'The repercussions of the pandemic are causing more harm to children than the disease'



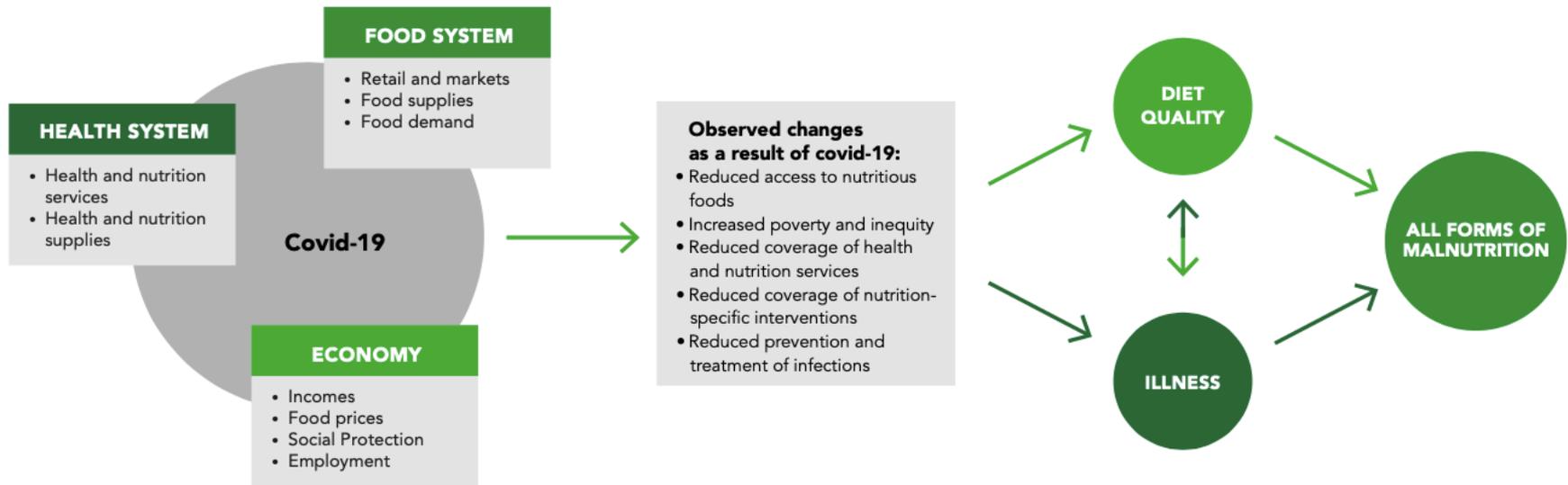
The Other Way Covid Will Kill: Hunger

Worldwide, the population facing life-threatening levels of food insecurity is expected to double, to more than a quarter of a billion ...

[nytimes.com](https://www.nytimes.com)

 Everyone can reply

Guiding conceptual framework



- Rooted in UNICEF Malnutrition Framework
- Modeling efforts are unique in bringing together three areas:
 - Food System
 - Health System
 - Economy

StFN Consortium continued efforts

• Oct – Dec 2020: second round of modeling

- 3-year time horizon x 3 scenarios (O,M,P)
- Looked at multiple nutrition outcomes (wasting, stunting, maternal anemia & low BMI)
- Looked at economic losses due to human capital impacts
- Complementary analysis on impacts on cost of a healthy diet
- Estimate investment cost required to regain losses
- Still limited by lack of “real time” data on coverage & nutrition outcomes

• Early 2021: StFN received grant from Government of Canada

- Applying “gender lens” to how women & girls might be disproportionately impacted
- Use “real” data coming out of countries - Mexico & India
- Expand advocacy

The screenshot displays the StFN website with a navigation bar at the top containing 'Research', 'Steering Committee', 'Events', 'News', 'Resources', 'Contact Us', and a 'Take Action' button. Below the navigation bar, there are two article cards. The first card is titled 'The COVID-19 crisis will exacerbate maternal and child undernutrition and child mortality in low- and middle-income countries' and lists authors: Saskia Osendarp, Jonathan Kweku Akuoku, Robert E. Black, Derek Headey, Marie Ruel, Nick Scott, Meera Shekar, Neff Walker, Augustin Flory, Lawrence Haddad, David Laborde, Angela Stegmüller, Milan Thomas, and Rebecca Heidkamp. The second card is titled 'COVID-19 pandemic leads to greater depth of unaffordability of healthy and nutrient-adequate diets in low- and middle-income countries' and lists authors: David Laborde, Anna Herforth, Derek Headey, and Saskia de Pee. Below the second article card, there is a large image of children's faces with the text 'Read our latest research' and two green callout boxes summarizing the key findings of the articles.

ARTICLES
<https://doi.org/10.1038/s43016-021-00179-4>

The COVID-19 crisis will exacerbate maternal and child undernutrition and child mortality in low- and middle-income countries

Saskia Osendarp^{1,2}, Jonathan Kweku Akuoku³, Robert E. Black⁴, Derek Headey⁵, Marie Ruel⁶, Nick Scott⁷, Meera Shekar⁸, Neff Walker⁹, Augustin Flory¹⁰, Lawrence Haddad¹¹, David Laborde¹², Angela Stegmüller¹³, Milan Thomas¹⁴ and Rebecca Heidkamp¹⁵

The economic crisis and food and health system disruptions related to the COVID-19 pandemic threaten to exacerbate undernutrition in low- and middle-income countries (LMICs). We developed pessimistic, moderate and optimistic scenarios for 2020–2022 and used three modelling tools (MIRAGROEP, the Lives Saved Tool and Optima Nutrition) to estimate the impacts of pandemic-induced disruptions on child stunting, wasting and mortality, maternal anaemia and children born to women with a low body mass index (BMI) in 118 LMICs. We estimated the cost of six nutrition interventions to mitigate excess stunting and child mortality due to the pandemic and to maximize alive and non-stunted children, and used the human capital approach to estimate future productivity losses. By 2022, COVID-19-related disruptions could result in an additional 9.3 million wasted children and 2.6 million stunted children, 168,000 additional child deaths, 2.1 million maternal anaemia cases, 2.1 million children born to women with a low BMI and US\$29.7 billion in future productivity losses due to excess stunting and child mortality. An additional US\$1.2 billion per year will be needed to mitigate these effects by scaling up nutrition interventions. Governments and donors must maintain nutrition as a priority, continue to support resilient systems and ensure the efficient use of new and existing resources.

EF COMMUNICATION
<https://doi.org/10.1038/s43016-021-00123-8>

COVID-19 pandemic leads to greater depth of unaffordability of healthy and nutrient-adequate diets in low- and middle-income countries

David Laborde¹, Anna Herforth², Derek Headey³ and Saskia de Pee^{4,5}

Unaffordability of healthy diets affected 3 billion people before the COVID-19 pandemic, 2.5 billion of whom lived in 63 low- and middle-income countries. In these 63 countries, income losses due to the pandemic have markedly worsened the affordability gap. The proportion of people unable to afford half the cost of a healthy diet increased from 43% to 50%; this increased unaffordability will aggravate undernutrition, micronutrient deficiencies and diet-related noncommunicable diseases.

additional 94.6 million (ranging from 21.6 million to 98.6 million for optimistic and pessimistic scenarios, respectively) and in 2022 an additional 32 million (18.4–57.6 million) compared with the no-COVID-19 2020 counterfactual (Fig. 1). The number of people who cannot afford a nutrient-adequate diet, which was 1.3 billion prior to the COVID-19 pandemic (36% of the countries' population), increased by 220 million (43%) (data not shown). Also highly concerning is the greater depth of unaffordability. The proportion of people who could not afford more than half the cost

WE CAN REVERSE THE CRISIS

The pandemic's continued disruption will have more impact than anticipated.

INVEST TO SAVE LIVES

OPTIMISTIC

6.4M wasted children
1.5M stunted children
47K child deaths
1.0M maternal anemia

MODERATE

9.3M wasted children
2.6M stunted children
168K child deaths
2.1M maternal anemia

PESSIMISTIC

13.6M wasted children
3.6M stunted children
283K child deaths
4.8M maternal anemia

THE PANDEMIC'S
ADDITIONAL IMPACT
ON NUTRITION
OUTCOMES

MAKE NUTRITION CENTRAL TO COVID-19 RECOVERY



**283,000
CHILD
DEATHS**



**3.6 MILLION
CHILDREN
STUNTED**



**13.6 MILLION
CHILDREN
WASTED**

Potential additional impacts of the COVID-19 pandemic on global levels of malnutrition by 2022

258

additional children
dying per day

An estimated additional
\$1.7 billion USD
will be required on top of the
\$7 billion USD
per annum needed to
reach global targets.

WE CAN REVERSE THE CRISIS

The pandemic's continued disruption will have more impact than anticipated. We stand to lose a decade or more in nutrition progress and associated economic and social costs.



GOOD NUTRITION

underpins *life-saving efforts* in COVID-19 recovery and response.

The estimated pandemic related increases in child stunting and child mortality may result in future productivity losses of

44.3 billion

**STAND FOR
NUTRITION
WITH US.**

#Stand4Nutrition

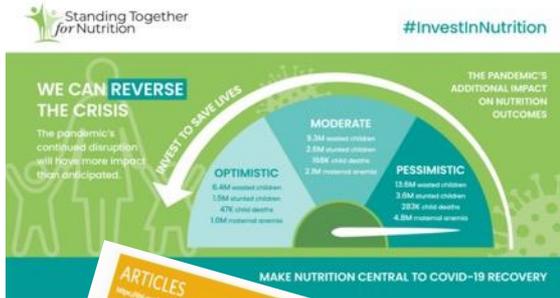
We need to stand together and act now.

StandingTogetherForNutrition.org

Advocacy: Amplification & Influencing

Nutrition Year of Action

2021



COVID's Impact on Malnutrition

The Standing Together for Nutrition (STAN) Consortium of leading experts in the areas of nutrition, economics, health, and food systems modelled the impact on nutrition due to the COVID-19 pandemic and the subsequent impacts on economic losses and productivity. Given the trajectory of the pandemic, the impact could be the 'worst case' scenario modelled.

- Globally, **ever 250 children may die each day** in the absence of immediate action, an additional 283,000 malnutrition-related deaths in children under five and 13.6 million more children under five wasted over 3 years. As a result, we stand to lose a decade or more of progress on nutrition.
- The **loss in economic productivity could be as high as \$44 billion dollars** globally due to additional burden of childhood stunting and child mortality. An additional 3.6 million children may suffer life-long physical and cognitive impairments that impede their full potential.
- **Urgent investments of \$1.7 billion in additional COVID-19 response investments and actions are needed** by leaders and decision makers to protect mothers and an entire generation of children - on top of the \$1.7 billion needed before the pandemic to reach SDG 2 by 2030.

Nutrition must be at the heart of all COVID-19 pandemic immediate and long-term recovery plans by all development stakeholders.

- **Increase investments and actions on nutrition** in global and national COVID-19 response and recovery plans that can be delivered through national health, food and social protection systems and programs.
- **Integrate the continuity of nutrition services** in the WHO COVID-19 Strategic Preparedness and Response Plan Monitoring Framework.
- **Prioritize nutrition** in the forthcoming World Bank's IDA30 replenishment to safeguard human capital-focused development priorities, with new Nutrition-focused IDA funds committed to the Crisis Response Window and the inclusion of key nutrition indicators in the Results Framework of the Human Capital PIIB.
- **Ensure health, food and social protection systems are strengthened** to address the key drivers of inequalities and underlying structural inequalities as part of medium- and long-term strategies to strengthen human capital with better nutrition integration.

The situation is worse than anticipated

The shocking rise of COVID-19 in recent months in many LMIC countries, particularly populous countries in South Asia with pre-existing high levels of malnutrition, is now projected to lead to a far greater rise in child deaths and malnutrition in mothers and young children than previously predicted.



2022



Articles
The COVID-19 crisis will exacerbate maternal and child undernutrition and child mortality in low- and middle-income countries

Saskia Ozdamar, Jonathan Kivuku Akuku, Robert E. Black, Derek Headley, Marie Ruel, Nick Scott, Meera Shekar, Neel Wabari, Augustin Flory, Lawrence Haddad, David Laborde, Angela Stegmüller, Milan Thomas, and Rebecca Heidkamp

The economic crisis and food and health system disruptions related to the COVID-19 pandemic threaten to exacerbate undernutrition in low- and middle-income countries (LMICs). We developed a new tool and online Nutrition Tool to estimate the impact of pandemic-related disruptions on child stunting, wasting and mortality, maternal anaemia and children born to women with a low body mass index (BMI) in 193 LMICs. We estimated the cost of no nutrition interventions to mitigate excess stunting and child mortality due to the pandemic, and to maintain alive and nourished children, and the human capital approach to estimate future productivity losses. By 2022, COVID-19-related disruptions could result in an additional 8.2 million stunted children and 1.6 million wasted children. 96,000 additional child deaths, 2.1 million maternal anaemia cases, 2.1 million children born to women with a low BMI and US\$29.7 billion in future productivity losses due to excess stunting and child mortality. An additional US\$1.2 billion per year will be needed to mitigate these effects by scaling up nutrition interventions. Governments and donors must maintain nutrition as a priority, continue to support resilient systems and ensure the efficient use of new and existing resources.

Large percentage of households surveyed in four African countries reported not having received medical attention during the pandemic owing to a lack of contracting the state or government institutions on mobility and social distancing requirements. Experience from previous pandemics suggests that health system recovery could be slow for example. It took more than a year for health care services to return fully after the 2014 Ebola outbreak in West Africa.

Sadia Kaenzig @skaenzig · 26 Jul

Right Here! Right Now! @karinasaid @Canada @CanadaDev bring @FoodSystems #PreSummit the gender angle of tackling Zero Hunger and brings the horrifying forecast of @STANutrition



117th CONGRESS
1st Session

H. R. 4693

IN THE HOUSE OF REPRESENTATIVES

July 26, 2021

Mr. McCaul (for himself, Mr. Meeks, Mrs. Kim of California, and Ms. Houlihan) introduced the following bill; which was referred to the Committee on Foreign Affairs

A BILL

To advance targeted and evidence-based interventions for the prevention and treatment of global malnutrition and to improve the coordination of such programs, and for other purposes.

Section 1. Short title

This Act may be cited as the "Global Malnutrition Prevention and Treatment Act of 2021".

Sec. 2. Authorization of efforts to prevent and treat malnutrition globally



PROSPERA
PROGRAMA
DE INCLUSIÓN SOCIAL

- STFN Country-specific analysis using COVID-19 era data

THE RISING COVID MALNUTRITION CRISIS

Join us for a virtual briefing to learn about the projected deterioration of maternal and child nutrition resulting from the COVID-19 pandemic, and opportunities to integrate nutrition into global COVID response and recovery plans.

AUGUST 10 @ 9-10 AM EDT
Register: bread.org/malnutritioncrisis

HOSTED BY: **Micronutrient FORUM**, **1000 DAYS**, **bread for the world**, **Standing Together for Nutrition**

Remarks by:
REP YOUNG KIM
REP CHRISSE HOULAHAN
 Speakers:
SHAWN BAKER (USAID)
DR. REBECCA HEIDKAMP (Johns Hopkins University)
ABDOULAYE KA (Government of Senegal)

THE WORLD BANK

WHO WE ARE | WHAT WE DO | WHERE WE WORK | UNDERSTAND

FEATURE STORY
A Model from Mexico for the World
 November 19, 2014

This page in: English | Español

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Indigenous mothers and their children in the State of Hidalgo, Mexico
 The World Bank

STORY HIGHLIGHTS

- The Prospera (previously Oportunidades) conditional cash transfer program has benefitted nearly six million families and has been replicated in 52 countries.

MÉXICO

Hacienda perfila 'el adiós' de Prospera y otros programas para 2020

La Estructura Programática que la secretaria entregó a la Cámara de Diputados contempla la desaparición del programa social estrella del sexenio pasado, así como otros cambios.

04 de 09 julio 2019 04:32 PM