



## Short communication

## The food security and nutrition crisis in Venezuela

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## ABSTRACT

As Venezuela's economic and political crises continues to evolve, hyperinflation, declining food production and food shortages are contributing to the deterioration of the food and nutrition situation. While official data is largely unavailable, food security and nutrition data from a variety of sources suggest that nearly the entire population is food insecure and that prevalence of acute malnutrition among children is reaching crisis levels in vulnerable populations. In the most recent national survey, 80% of households were food insecure and most households receiving government food assistance reported only occasional receipt. Prevalence of acute malnutrition among children under five increased in vulnerable communities across many states, surpassing serious or critical thresholds in multiple states. Hospitals across the country are reporting increases in both the number and proportion of pediatric consultations and admissions with acute malnutrition, and malnutrition deaths are increasingly common. Declining food security, increases in prevalence of acute malnutrition among children in vulnerable communities, rising pediatric hospital admissions with acute malnutrition and clinician reports of child deaths due to acute malnutrition are indicative of a crisis. The response to the nutrition and food security crisis to date has been limited. There is an urgent need to begin taking steps to address widespread food insecurity and to support treatment for children with acute malnutrition.

## 1. Background

The economic and political crisis in Venezuela has evolved into a complex humanitarian emergency with widespread regional impacts. An estimated 3 million Venezuelans have fled the country, with the majority seeking refuge in Latin American and Caribbean countries ([International Organization for Migration \(IOM\), 2018a](#)). The inflation rate in Venezuela is the highest in the world, at 1.37 million percent in 2018, with projections for 2019 in excess of 10 million percent ([Reuters, 2018](#)). Hyper-inflation, import restrictions and reductions in government-supported food distributions have contributed to decreases in both food availability and access ([ACAPS, 2018](#); [Rosati, 2018](#)). The scale of the current food insecurity crisis is immense, as government food distributions via Local Provision and Production Committees (CLAP) are limited and unreliable, and food is scarce and economically out of reach. In mid-2018, a dozen eggs cost the equivalent of two-weeks pay in a minimum wage job ([Krygier, 2018](#)) and the situation is likely to worsen as inflation outpaces minimum wage increases. Official data on the socio-economic and health status of the Venezuelan population and the humanitarian situation is largely unavailable, which poses a challenge to understanding the extent and the severity of the crisis.

The Integrated Food Security Phase Classification (IPC) System is a standardized approach to analysis of food insecurity and acute malnutrition situations that is used to describe the severity and magnitude of a food or nutrition crisis with respect to international standards ([Integrated Food Security Phase Classification \(IPC\)](#)). The IPC uses information on food consumption, acute malnutrition and mortality to determine the severity of a crisis on a five point scale that is intended to be comparable over time and place. In the case of Venezuela, data are unavailable, making the IPC difficult to apply. While there is good quality national survey data characterizing gradual declines in food security ([España and Ponce, 2018](#)), recent data is less available and there is a paucity of information on nutrition status. Official nutrition statistics have not been available for Venezuela for almost a decade ([Maternal and Infant Education and Nutrition Recuperation Service, 2018](#)), and no current nationally or regionally representative data on child nutrition is available. The nutrition situation in Venezuela deteriorated in the 1990s amidst economic challenges, declines in national production and increases in importation, prior to rebounding in the 2000s ([Schuyler, 2002](#)). National child nutrition indicators for Venezuela in 2009, the most recent year available, showed a relatively good picture, with 4.1% of children suffering from wasting (acute malnutrition) and 13.4% stunting (chronic malnutrition) ([Ficha técnica: Evaluación](#)

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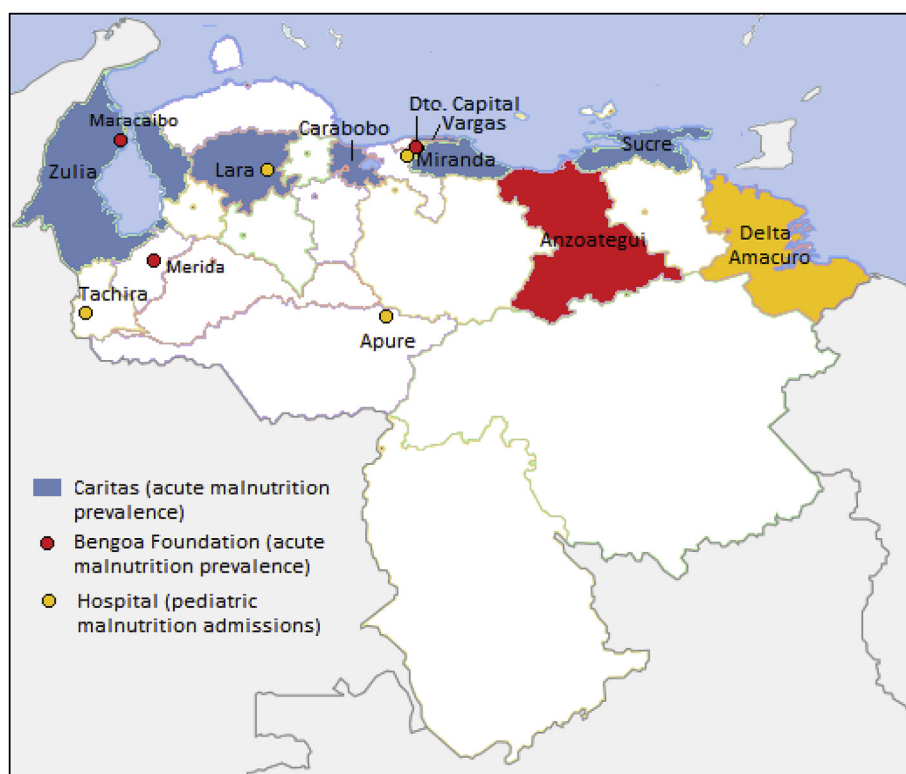


Fig. 1. Available data on acute malnutrition in children (Derivative work, 1434).

antropométrica nutricional en menores de 5 años según criterios internacionales, 2012).

Available information from NGO monitoring of vulnerable populations and hospitals suggests a deterioration in child nutrition status over the past several years. In this paper we summarize available data on the food and nutrition situation in Venezuela and assess if the crisis meets thresholds for a food emergency. This analysis represents a joint effort of Johns Hopkins School of Public Health and Human Rights Watch and includes a literature review and nutrition information shared through key informant networks (Fig. 1).

## 2. Declining food security

Financial collapse and hyperinflation have led to widespread declines in food access, making day-to-day sustenance increasingly difficult for most Venezuelans, such that the food shortage is a primary driver of migration out of Venezuela (UN Refugee Agency (UNHCR), 2018a). Since 2008, domestic food production in Venezuela has been in decline (Food and Agriculture Organization (FAO)). Food imports, purchased with oil revenues, increased from 2007 thru 2012; however, with the 2014 fall in oil revenues, government food subsidies and price controls became unsustainable (Food and Agriculture Organization (FAO); Benzaquen, 2017). Food imports fell by 67% between the beginning of 2016 to the end of 2017 as limited resources were diverted away from importation of goods in favor of debt payments (Aponte and Martinez, 2018). Despite this significant decline, Venezuela imports 75% of food (Food and Agriculture Organization (FAO), 2018b) and the food deficit enhances ramifications of the economic crisis. Government regulations, currency and fiscal policies, and property seizures have weakened production capacity, such that national production could not be adequately scaled up when food imports dropped (Aponte and Martinez, 2018).

The National Living Conditions Survey (ENCOVI) is the best information source on household socioeconomic status and food security, including CLAP box receipt. In the most recent 2017 ENCOVI, 87% of

households lived in poverty, up from 48% in 2014, and 80% were food insecure. In 2017, the majority (75%) of households were receiving CLAP boxes, however, distributions were irregular: 31% received boxes monthly, 16% bi-monthly and the majority (54%) on a less frequent basis. Caracas was the only location where most (62%) households received monthly distributions; elsewhere, CLAP boxes were received intermittently and served as a supplement to other food sources. Access to CLAP boxes is somewhat political, where they have been used to secure votes and are more likely to be received by holders of new identify cards (Carnet de La Patria or Fatherland Card) which are also used to track voting (Maternal and Infant Education and Nutrition Recuperation Service, 2018; Food and Agriculture Organization (FAO), 2018b). Lack of food access impacts almost the entire population: nearly 90% of households indicated they had insufficient income to purchase food, 80% reduced meal size due to lack of food, and 61% reported going to bed hungry. Dietary quality has also deteriorated due to protein consumption decline resulting from the need to purchase less expensive and nutritious foods (Maternal and Infant Education and Nutrition Recuperation Service, 2018). The United Nations reports undernutrition has increased since 2010/12 and for 2015/17, the most recent available estimates, 3.7 million Venezuelans or 11.7% of the population was undernourished (Fig. 2) (Food and Agriculture Organization/World Health Organization/World Food Programme/UNICEF, 2018).

## 3. Increasing prevalence of acute malnutrition

Prevalence of global acute malnutrition (GAM) among children 6–59 months of age is a commonly used indicator to assess the severity of nutrition crises (World Health Organization (WHO), 2000). GAM is typically estimated using household surveys with probability-based sampling to ensure a representative sample (The SMART Initiative, 2017); however, in Venezuela, no recent nutrition survey data representative of populations at state or national levels is available, making it difficult to assess the severity of the nutrition crisis using

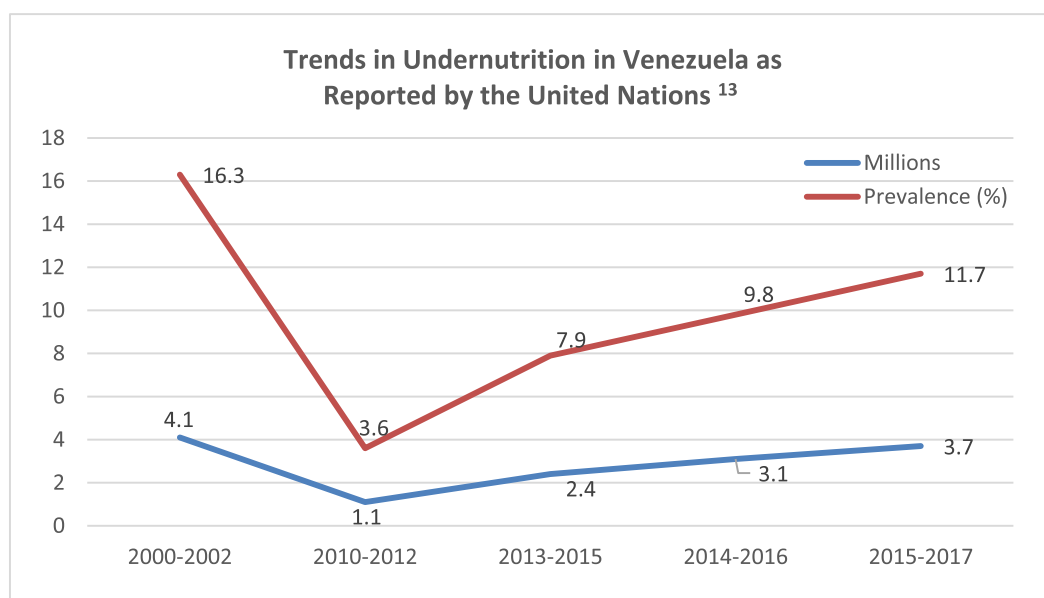


Fig. 2. Trends in undernutrition in Venezuela as reported by the united nations (Benzaquen, 2017).

common indicators. The political climate in Venezuela has prevented these types of assessments and collection and reporting of health and nutrition data more broadly (Schuyler, 2002; Kohut and Herrera, 2017), making it difficult to aptly characterize the extent of the crisis using standard approaches and indicators. Data on prevalence of acute malnutrition is collected by several organizations in Venezuela, and while available figures are not representative of the broader population, they indicate the emergence of a nutrition crisis among vulnerable populations.

The non-government organization Caritas has been monitoring food security and malnutrition among children under five in vulnerable communities in four states since 2016 (Vargas, Zulia, Miranda and the Distrito Capital) before expanding to three additional states (Sucre, Carabobo, Lara) in late 2017 (Sistemade Monitoreo). Monitoring is conducted in approximately 4–7 locations per state, with samples ranging from 725 to 1445 per assessment. Caritas observed an increase in GAM from 8.9% in the late 2016 to 13.5% in mid-2018, however, methodological issues preclude a simple trend analysis. More accurate interpretation of Caritas GAM prevalence rates requires analysis of trends over time by location (Fig. 3a) which suggests an increase in GAM in many states from late 2016 to mid-2018. In the first quarter of 2018, GAM ranged from a moderate level of concern (< 10%, Distrito Capital and Lara), to a serious situation (10–14.9%, Miranda and Sucre) to a critical situation (> 15%, Vargas, Zulia and Carabobo) according to standard thresholds for classification of nutrition emergencies set by WHO (2018). July 2018 data suggests further deterioration in Vargas (19.7% GAM) and the Distrito Capital (16.7%), and with the exception of Sucre the threshold for defining a nutrition crisis was surpassed in all states (see Fig. 4).

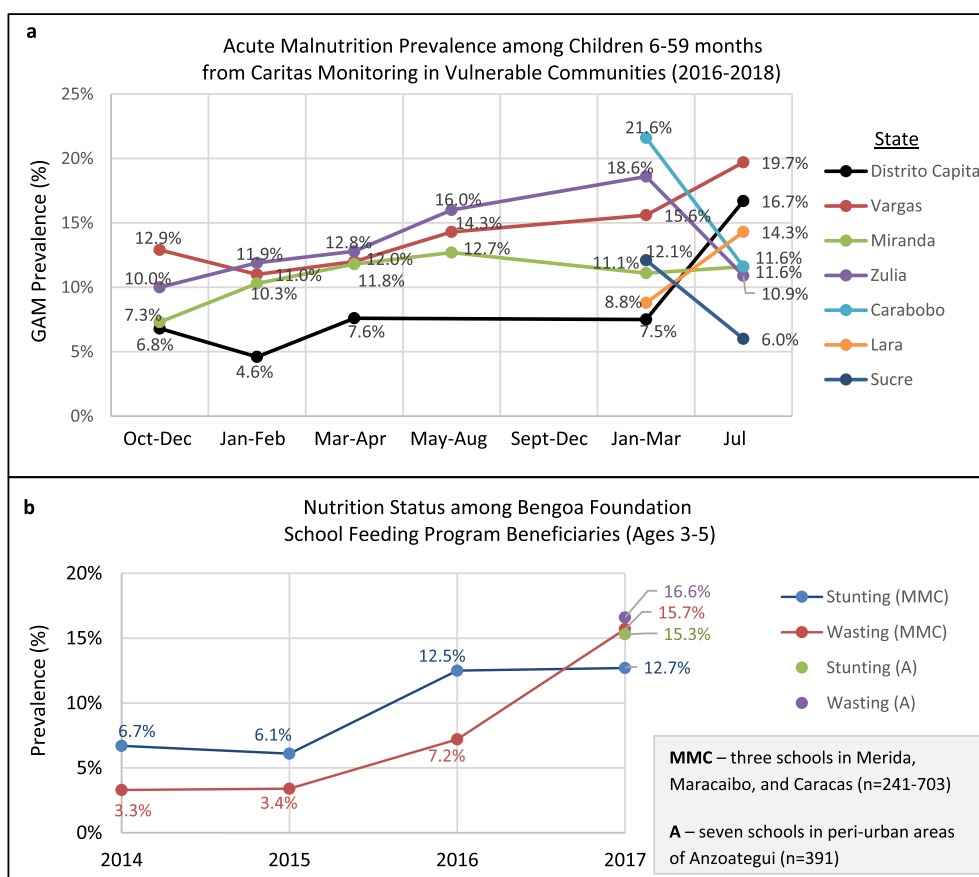
The Bengoa Foundation, a non-profit working in the area of nutrition, shows a similar trend of deteriorating nutrition status among preschool children in school feeding programs. Available data is from three schools in Maracaibo, Merida and Caracas from 2014 to 2017 and seven schools in peri-urban areas of Anzoategui in 2017 (Fig. 3b). Among 3–5 year old children in Maracaibo, Merida and Caracas monitored from 2014 to 2017, acute malnutrition increased from 3.3 to 3.4% in 2014/15 to 7.2% in 2016 and 15.5% in 2017; acute malnutrition in Anzoategui was similarly high at 16.7% in 2017 (21). Caritas and Bengoa foundation data are not representative of the population at large, however they suggest the emergence of a nutrition emergency in 2017 which has expanded in terms of both severity and

geography in late 2017 and early 2018. Available evidence indicates deteriorating nutrition affects not just children, but a majority of the population. A 2018 Caritas nutrition survey found that 38% of pregnant women in vulnerable communities had acute malnutrition (Landaeta-Jimenez, 2018; The Sphere Project, 2011). National estimates from 2016 indicate nearly one in three (29.1%) of pregnant women were anemic (World Health Organization (WHO)), and this figure has likely increased since. The 2017 ENCOVI, perhaps the best source of nationally representative information, found that 64.3% of the population reported losing weight in the preceding year, with an average decrease of 11.4 kg among adults (Maternal and Infant Education and Nutrition Recuperation Service, 2018).

#### 4. Increasing hospital admissions with acute malnutrition and mortality

Hospitals across the country report both an increase in the number and proportion of consultations and admissions with acute malnutrition. The Venezuelan Society of Childcare and Pediatrics reported in mid-2018 that 72% of children presenting for emergency care at public hospitals show some degree of poor nutrition not associated with illnesses, but as a result of inappropriate food consumption, and that hospital admissions of children with conditions related to dietary deficiencies, such as wasting, kwashiorkor and pellagra, are rising rapidly (Machado, 2018). Hospital data from two sources, a pediatric hospital in Caracas and selected public hospitals in Delta Amacuro state show increasing pediatric admissions with acute malnutrition over the past several years (Fig. 3). In Caracas, there were approximately 30 admissions with severe acute malnutrition (SAM) annually in 2014/15 compared to around 100 in both 2016 and 2017; the proportion of pediatric patients with SAM increased from 5 to 6% in 2014/15 to 16–19% in 2017 (Caracas Public Hospital, 2018). In hospitals Delta Amacuro State, there were 180–220 pediatric hospital admissions with acute malnutrition annually from 2011 to 2013; in 2014 and later years, annual admissions exceeded 300 with a pronounced increase in 2017 when admissions surpassed 600 (Schuyler, 2002).

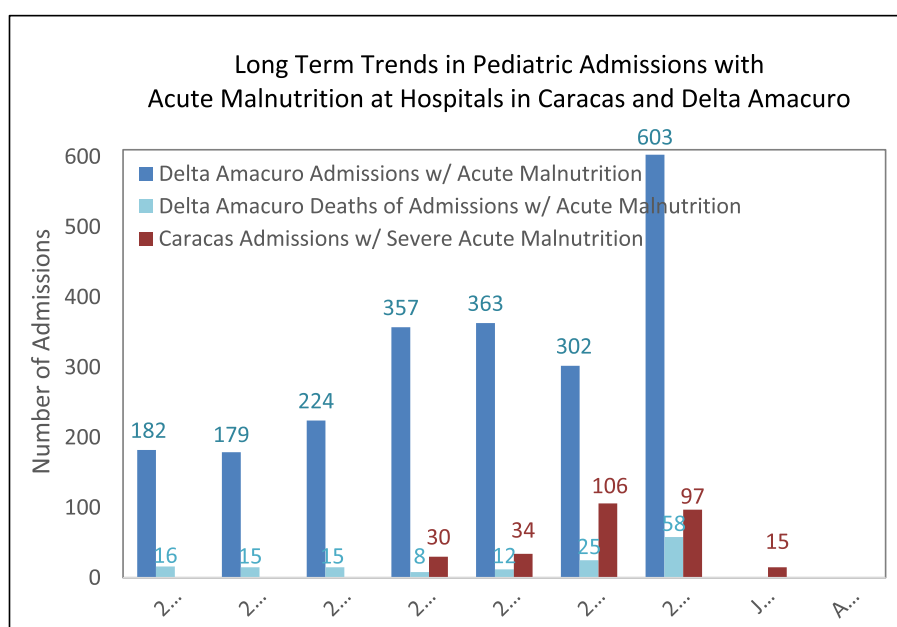
Data on pediatric admissions with acute malnutrition and mortality was obtained for additional facilities in 2018 (Table 1), however, interpretation presents a challenge since trend analysis is not feasible and under-reporting is likely due prohibition of the diagnosis and a culture of fear among providers that limits reporting of malnutrition cases and



**Fig. 3.** a: Acute Malnutrition Prevalence among Children 6–59 months from Caritas Monitoring in Vulnerable Communities (2016–2018). 3b: Nutrition Status among Bengoa Foundation School Feeding Program Beneficiaries (Ages 3–5).

deaths (*Sistemade Monitoreo*). It is also unclear how closure of nutrition services at some hospitals impacts admissions at hospitals where data was available. The proportion of pediatric hospital admissions with acute malnutrition ranged from 17.7% to 40.5% in early 2018, which is high when compared to proportions reported elsewhere. For

reference, SAM prevalence among pediatric hospital admissions has been documented at 0.7% in Spain, 5.2% in Yemen, 6.2% in Turkey, 10.4% in Kenya and 20.2% in Ethiopia (*Moreno Villares et al., 2017; Badi and Ba-Saddik, 2016; Sahin et al., 2017; Gachau et al., 2018; Gordon et al., 2013*). A December 2017 report by the New York Times



**Fig. 4.** Long term trends in pediatric admissions with acute malnutrition at hospitals in Caracas and Delta Amacuro.

**Table 1**  
2018 pediatric hospital admissions with acute malnutrition.

Hospital Location (State)	Time Period	Admissions w/Acute Malnutrition		Deaths Among Admitted Patients	
		N	%	N	%
Caracas <sup>a</sup>	January	15	40.5%	–	–
Apure	Jan–Mar	20	17.7%	–	–
Tachira	Jan–Mar	49	–	5	10.2%
Lara <sup>a,b</sup>	Jan–May	41	25.5%	57	28.4%
Delta Amacuro <sup>c</sup>	Jan–Mar	415	31.2%	140	10.5%

<sup>a</sup> Admissions with severe acute malnutrition in Caracas and Lara; in other states it was not indicated if reporting was inclusive of moderate acute malnutrition or only severe acute malnutrition.

<sup>b</sup> Deaths among admissions with severe and moderate malnutrition only.

<sup>c</sup> Reporting for multiple hospitals in the state.

found that in 21 public hospitals across 17 states, emergency rooms are being overwhelmed by acute malnutrition cases—a condition that was rarely encountered prior to the economic crisis. The Times estimated that 2800 cases of acute malnutrition presented at nine public hospitals [where data was made available] the preceding year, of which at least 400 died, and noted that in some hospitals, SAM cases have tripled (*Sistemade Monitoreo*). Higher mortality rates among 2018 pediatric hospital admissions with malnutrition in Delta Amacuro State were attributed to increases in malaria and measles; more broadly, inability of public hospitals to provide patients with adequate medical care and nutritional intake contributes to adverse outcomes among hospital patients (Schuyler, 2002; Caracas Public Hospital, 2018).

## 5. A crisis with limited to No response

Together, declining food security, increases in prevalence of acute malnutrition among children in vulnerable communities, rising pediatric hospital admissions with acute malnutrition and clinician reports of increasing child deaths due to acute malnutrition are indicative of a crisis. However, the extent remains unclear due to lack of availability of representative data, suppression of reporting of both malnutrition cases and deaths (*Sistemade Monitoreo*) and the inability to conduct comprehensive assessments. Acute malnutrition prevalence rates among children in vulnerable communities monitored by Caritas and the Bengoa Foundation exceeded 15% in 2017/18 and national surveys from this time period conclude food insecurity is widespread, both of which are indicative of an emergency by international standards (*The SMART Initiative*, 2017). While the paucity of available data hampers articulation of the scale of the emergency, basic projections using recent UN population estimates for total population and emigration and varying prevalence rates of acute malnutrition suggest that hundreds of thousands of children are impacted (Table 2). These figures suggest that anywhere between 267,000–384,000 Venezuelan children under five have acute malnutrition if the crisis is serious, and if the crisis is in fact critical, the caseload could exceed 400,000.

Regardless of where the true number of acutely malnourished children falls, the requisite response is not in place and needs are going

**Table 2**  
Caseload projections of venezuelan children with acute malnutrition (United Nations (UN); UN Refugee Agency (UNHCR), 2018b; US Census Bureau).

Population Estimates		Acute Malnutrition Prevalence Rate		Projected Acute Malnutrition Caseload, Children 6–59 mos.
2017 Population Estimate	31,977,000	Pre-crisis	4.1% <sup>11</sup>	109,380
Crisis Emigration (since 2015)	2,300,000	Moderate	5–9.9%	133,390–264,110
2018 Projected Population <sup>a</sup>	30,877,000	Serious	10–14.9%	266,780–384,163
2018 Children 6–59 months <sup>b</sup>	2,667,800	Critical	> 15%	> 400,170

<sup>a</sup> Estimated by simple subtraction of emigrants from total population due to imprecision of available figures.

<sup>b</sup> Based on US Census Bureau IDB estimate that children < 5 account for 9.6% of the total population; (US Census Bureau) does not account for possible differential emigration by age or recent reported increases in mortality.

unmet. Humanitarian assistance has been limited by the government's refusal to acknowledge the crisis and limitations imposed on UN and other organizations that typically are engaged in humanitarian response (ACAPS, 2018). In 2016, Venezuela received US\$7.7 million in humanitarian assistance and US\$47 million in development aid, of which only US\$1.8 million was for food security and agriculture (*Development Initiatives*, 2018). While international humanitarian assistance for the Venezuela response has dramatically scaled up in 2018, much of the funds are directed to countries hosting large numbers of Venezuelan that have fled (*Food and Agriculture Organization (FAO); International Organization for Migration (IOM)*, 2018b).

For the majority that have not left their country, the crisis persists and there are few available avenues the international humanitarian community can pursue to improve the situation. Despite international consensus there is a humanitarian emergency in Venezuela, there is hardly any response from the international community. The UN is hamstrung, as it was in Syria, since it does not have the political will to insist upon intervening contrary to the wishes of the government. Thus, lack of coordination, severely limited access and the harsh political climate inhibit the delivery of assistance at a scale that would typically occur in a crisis of this magnitude. However, many local organizations are independently implementing health and nutrition activities in response to the emergency as part of development programs. Expanding the scale of these efforts could ameliorate the impacts of the crisis until the political climate permits a response of a more appropriate scale. Once this is possible, one foreseeable solution is the establishment of a tripartite group comprised of representatives of the Venezuelan government, UN agencies and civil society, which would coordinate the provision of humanitarian assistance; this approach could address government concerns that food aid would enable outside interference (*International Crisis Group*, 2018). More immediately, since development assistance remains acceptable, scaling up aid in the areas of food security and agriculture could improve food security in the medium and long-term by beginning to address the food deficit. Support to commercial farms, food production facilities and associated enterprises could begin to increase national production capacity whilst investments in smallholder farmers, such as farmer-field schools and provision of agricultural inputs, could contribute to both improved household food security and food availability.

While the scale of the evolving humanitarian crisis inside Venezuela remains unknown, the millions of Venezuelans fleeing the country provide a barometer of its severity. A much larger response inside Venezuela is urgently needed; how to deliver this response is less clear given the political constraints. In the meantime, development assistance should continue and be expanded to address the most urgent food security and nutrition needs. As the political situation evolves, strategies to address the roots of the crisis must be considered with the engagement of countries hosting Venezuelan migrants and other international actors that can support economic reform and recovery.

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## References

- ACAPS, 23 May 2018. Venezuela Humanitarian Crisis – Thematic Report. . <https://www.acaps.org/special-report/venezuela-humanitarian-crisis>, Accessed date: 10 September 2018.
- Aponte, A., Martinez, A.I., March 12, 2018. For Poor Venezuelans, a Box of Food May Sway Vote for Maduro. Reuters. <https://www.reuters.com/article/us-venezuela-politics-food/for-poor-venezuelans-a-box-of-food-may-sway-vote-for-maduro-idUSKCN1GO173>, Accessed date: 12 September 2018.
- Badi, M.A., Ba-Saddik, I.A., 2016. Severe acute malnutrition among hospitalized children, aden, Yemen. *OJEpi* 6, 2. <https://doi.org/10.4236/ojepi.2016.62012>.
- Benzaquen, M., July 16, 2017. How Food in Venezuela Went from Subsidized to Scarce. New York Times. <https://www.nytimes.com/interactive/2017/07/16/world/americas/venezuela-shortages.html>, Accessed date: 12 September 2018.
- Caracas Public Hospital, July 2018. Data on Pediatric Admissions with Acute Malnutrition and Mortality from 2014-2018. Files provided by Human Rights Watch.
- Derivative work. Original file source: HogweardLocalizador Politico de Venezuela.svg: Unukalhai - Localizador Politico de Venezuela.svg, CC BY-SA 3.0, <https://commons.wikimedia.org/w/index.php?curid=41434391>. Retrieved Sep 14, 2018.
- Development Initiatives. Development Data Hub. URL: <http://data.devinit.org/>. Accessed Sep 28, 2018.
- Espana, L.P., Ponce, M.G., 2018. Evolucion de la Pobreza. Encuesta Nacional de Condiciones de Vida (ENCOVI) 2017. Universidad Catolica Andres Bello: Caracas. <https://www.ucab.edu.ve/wp-content/uploads/sites/2/2018/02/ENCOVI-2017-presentaci%C3%B3n-para-difundir-.pdf>, Accessed date: 25 July 2018. <https://www.ucab.edu.ve/wp-content/uploads/sites/2/2018/02/ENCOVI-Alimentaci%C3%B3n-2017.pdf>.
- Ficha técnica: Evaluación antropométrica nutricional en menores de 5 años según criterios internacionales, 2012. Caracas, Venezuela: Gobierno Bolivariano de Venezuela, Ministerio del Poder Popular para la Salud. INN (2009 Extract). Latest available national data, cited by UNICEF/WHO/World Bank Joint Estimates on Child Malnutrition, May 2018. URL: <https://data.unicef.org/topic/nutrition/malnutrition/>, Accessed date: 6 September 2018.
- Food and Agriculture Organization (FAO). FAO Statistics for the Bolivarian Republic of Venezuela. URL: <http://www.fao.org/faostat/en/#country/236>. Accessed Sep 12, 2018.
- Food and Agriculture Organization (FAO). reportEarly Warning and Early Action Report, June-April, 2018. URL: Food and Agriculture Organization (FAO). Accessed Sep 25, 2018.
- Food and Agriculture Organization/World Health Organization/World Food Programme/UNICEF, 2018. Food Security and Nutrition Overview in Latin America and the Caribbean. 2018.
- Gachau, S., Irimu, G., Ayieko, P., Akech, S., Agweyu, A., English, M., et al., 2018. Prevalence, outcome and quality of care among children hospitalized with severe acute malnutrition in Kenyan hospitals: a multi-site observational study. *PLoS One* 13 (5), e0197607. <https://doi.org/10.1371/journal.pone.0197607>.
- Gordon, D.M., Frenning, S., Draper, H.R., Kokeb, M., 2013. Prevalence and burden of diseases presenting to a general pediatrics ward in Gondar, Ethiopia. *J. Trop. Pediatr.* 59 (5), 350–357.
- Integrated Food Security Phase Classification (IPC). [www.ipcinfo.org](http://www.ipcinfo.org). Accessed Jan 28, 2019.
- International Crisis Group, March 21, 2018. Containing the Shock Waves of Venezuela. Latin America Report #65.
- International Organization for Migration (IOM). Number of Refugees, Migrants from Venezuela Reaches 3 Million. 9 Nov 2018a. URL: <https://www.iom.int/news/number-refugees-migrants-venezuela-reaches-3-million>. Accessed Nov 21, 2018.
- International Organization for Migration (IOM), 2018b. Migration Trends in the Americas – the Bolivar Republic of Venezuela. [http://robuenaosaires.iom.int/sites/default/files/Informes/National\\_Migration\\_Trends\\_Venezuela\\_in\\_the\\_Americas.pdf](http://robuenaosaires.iom.int/sites/default/files/Informes/National_Migration_Trends_Venezuela_in_the_Americas.pdf).
- Kohut, M., Herrera, I., Dec 17, 2017. For Five Months, the New York Times Tracked 21 Public Hospitals in Venezuela. Doctors Are Seeing Record Numbers of Children with Severe Malnutrition. Hundreds Have Died. The New York Times. <https://www.nytimes.com/interactive/2017/12/17/world/americas/venezuela-children-starving.html>.
- Krygier R. In Socialist Venezuela, the US Dollar Becomes King. The Washington Post, August 2, 2018. URL: [https://www.washingtonpost.com/world/in-socialist-venezuela-the-us-dollar-becomes-king/2018/08/01/7af16482-9442-11e8-818b-e9b7348cd87d\\_story.html?noredirect=on&utm\\_term=.7ea77298b4e1](https://www.washingtonpost.com/world/in-socialist-venezuela-the-us-dollar-becomes-king/2018/08/01/7af16482-9442-11e8-818b-e9b7348cd87d_story.html?noredirect=on&utm_term=.7ea77298b4e1). Accessed Sep 12, 2018.
- Landaeta-Jimenez, M., 17 Feb 2018. The Bengoa Foundation: Living Conditions and Nutrition Among the Youth Population in Venezuela. Caracas. [www.fundacionbengoa.org](http://www.fundacionbengoa.org).
- Machado, L.T., May 16, 2018. Presentation in the National Assembly of Venezuela, before the Permanent Commission of the Family. Caracas, Venezuela.
- Maternal and Infant Education and Nutrition Recuperation Service, 2018. Delta Amacuro state. Cited in a “the faces of malnutrition,” In: Presented by Dr. Julio Romero at the Oriental Days of Pediatrics Meeting, Venezuela, July 6-7.
- Moreno Villares, J.M., Calderon, C.C., Bousoño García, C., 2017. Malnutrition in children admitted to hospital. Results of a national survey. *Anales de Pediatría* 86 (5), 237–290. <https://doi.org/10.1016/j.anpede.2015.12.006>.
- Reuters, October 9, 2018. IMF Sees Venezuela Inflation at 10 Million Percent in 2019. <https://in.reuters.com/article/venezuela-economy/imf-sees-venezuela-inflation-at-10-million-percent-in-2019-idINKCN1MJ1YX>, Accessed date: 28 January 2019.
- Rosati, A., 23 July 2018. Venezuela's Inflation to Reach 1 Million Percent, IMF Forecasts. Bloomberg News. <https://www.bloomberg.com/news/articles/2018-07-23/venezuela-s-inflation-to-reach-1-million-percent-imf-forecasts>, Accessed date: 10 September 2018.
- Sahin, Y., Goktepe, A.R., Ozen, E., 2017. Prevalence of malnutrition in a tertiary hospital in Turkey: overlooked subject? *Arch. Clin. Gastroenterol.* 3 (2), 041–046. <https://doi.org/10.17352/2455-2283.000037>.
- Schuyler, George W., 2002. Globalization and health: Venezuela and Cuba. *Can. J. Dev. Stud./Revue canadienne d'études du développement* 23 (4), 687–716. <https://doi.org/10.1080/02255189.2002.9669969>.
- Caritas Sistema de Monitoreo, Alerta y Atención en Nutrición y Salud (SAMAN), Boletins 1-7.
- The SMART Initiative, 2017. Measuring mortality, nutritional status, and food security in crisis situations: SMART methodology, version 2. <https://smartmethodology.org/survey-planning-tools/smart-methodology/smart-methodology-manual/>, Accessed date: 12 September 2018.
- The Sphere Project, 2011. Sphere Handbook: Humanitarian Charter and Minimum Standards in Disaster Response. Rugby: the Sphere Project. <http://www.spherehandbook.org/en/appendix-4/>.
- UN Refugee Agency (UNHCR). Venezuela Situation Supplementary Appeal. January to June 2018a. URL: <http://reporting.unhcr.org/sites/default/files/UNHCR%20Venezuela%20Situation%202018%20Supplementary%20Appeal.pdf>. Accessed Sep 10, 2018.
- UN Refugee Agency, 2018b. UNHCR and IOM Chiefs Call for More Support as Outflow of Venezuelans Rises across the Region. <http://www.unhcr.org/en-us/news/press/2018/8/5b7e84134/unhcr-iom-chiefs-call-support-outflow-venezuelans-rises-across-region.html>.
- United Nations (UN). Data on the Bolivarian Republic of Venezuela. URL: <http://data.un.org/en/iso/ve.html>, Accessed Sep 14, 2018.
- US Census Bureau. International Database (IDB). Venezuela Population Statistics. URL: <https://www.census.gov/data-tools/demo/idb/>. Accessed Sep 14, 2018.
- World Health Organization (WHO), 2000. Management of Nutrition in Major Emergencies. WHO, Geneva Available at: <http://www.who.int/nutrition/publications/emergencies/9241545208/en/>, Accessed date: 12 September 2018.
- World Health Organization (WHO). Nutrition Landscaping Information System. Global Nutrition Monitoring Framework Country Profile: Venezuela. URL: <http://apps.who.int/nutrition/landscape/global-monitoring-framework?ISO=VEN>. Accessed Sep 28, 2018.