

El Niño and its human toll

EXECUTIVE SUMMARY

El Niño is a regularly occurring complex weather phenomenon that causes increased rainfall in some areas and drought in others. This year's record-breaking El Niño, 2015–2016, is having dire human consequences: Some 60 million people have been impacted in the most-affected regions—Africa, Latin America and Asia—and 17 million people will face **acute food crises** in the countries most affected.¹

While Catholic Relief Services and its partners assess, prepare for and respond to the impacts of El Niño, *we call on the U.S. government to take these urgent steps:*

1. Bolster and immediately issue funding for countries where El Niño has the biggest impact.
2. Use appropriate assistance mechanisms, such as the Bill Emerson Humanitarian Trust, and provide flexibility to optimize our response through market-based assistance, where feasible.
3. Address the health impacts of El Niño, including acute malnutrition, through feeding centers for children and nursing mothers.
4. Employ regional cooperation to address the cross-border impact of El Niño.
5. Build resilience and reduce disaster risks by strengthening early warning systems for early action.

In addition, we urge the U.S. government to take the following steps over the long-term to reduce the likelihood of, and prepare for, future extreme weather events:

1. Prepare to address the lasting impacts of El Niño through at least the end of 2016. Many of those impacted have experienced prior seasons of drought or other shocks, leaving them without a cushion to bounce back. Should a La Niña event follow El Niño, they will face further devastation that may be irreversible.
2. Address the underlying problem of climate change—which appears to have intensified the impacts of El Niño—through climate-smart agriculture, adaptation and mitigation strategies.
3. Make humanitarian and development funding longer term, integrated and flexible, to build resilience among the most vulnerable people.

60 million

PEOPLE HAVE BEEN IMPACTED
IN THE MOST-AFFECTED
REGIONS—AFRICA,
LATIN AMERICA AND ASIA



Ethiopia is facing the worst drought in 50 years. An initial dry spell extended throughout 2015 and, with the affects of climate change and El Niño, the devastating lack of water could last for much of this year. Upwards of 80 percent of Ethiopians rely on mostly rainfed agriculture for their food and income. *Photo by Nancy McNally/CRS*

What is El Niño? El Niño is a complex weather phenomenon characterized by unusually warm ocean temperatures in the equatorial Pacific. Occurring every 2 to 7 years, it can have important consequences for weather around the globe, including increased rainfall in some areas and drought in others.



The impact of climate change on El Niño. While El Niño is a regular and naturally occurring phenomenon, experts agree that the record-breaking strength of this year's El Niño can be attributed to increasing temperatures of the ocean surface, which have risen more than 5.4 degrees Fahrenheit.² Thus, climate change can have a *multiplier effect* on existing weather patterns, including El Niño. Yet while climate models may predict its effects, it is very difficult to establish its precise impact in every location.

An estimated 17 million people globally will be in acute food and livelihood crisis due to El Niño. That's twice the population of New York City.

THE HUMAN TOLL OF EL NIÑO

Zimbabwe is among the countries hardest hit by El Niño. Drought permeates every aspect of people's lives. Before the current El Niño, 1.5 million rural Zimbabweans struggled with hunger. The drought has devastated their main food sources—agriculture and livestock. Families are now eating only one meal a day and searching for wild fruit to survive. The Government of Zimbabwe declared a state of disaster in February 2016. Now, more than a quarter of the population, or 2.4 million people, need food assistance.

David Mwaitomupi, the principal at Chidoma Secondary School in the Gokwe region of northwestern Zimbabwe says: "We've had students falling unconscious in school. Some [students] walk several hours home and go to bed without eating. Then they wake up and walk back to school again with nothing in their stomachs." The school has no money to provide meals. "We are seeing [students] drop out. They cannot pay the fees [for] their final exams and once they drop out, they drop out for good."



A girl walks on a basin that used to be a watering hole. Photo by Nancy McNally/CRS

Why El Niño matters. The El Niño of 2015–2016 is one of the top-three strongest on record, and the human toll is already dire. The United Nations estimates that 60 million people will be impacted by El Niño, and 17 million will face “acute food and livelihood crisis” or Integrated Phase Classification Phase 3. Practically speaking, this means that 17 million people will only be able to meet their caloric needs by selling off household goods, which will make them more vulnerable in the long run.

The severity of the 2015–2016 El Niño is of particular concern to CRS, as extreme weather events are greatly impacting the millions of smallholder farmers that depend on rainfed agriculture and livestock for their daily food and livelihoods. Further, the poor are extremely vulnerable to such shocks, given their limited livelihoods options and lack of safety nets, while this El Niño follows previous years of drought and/or conflict that have depleted any existing resources they might have had.

The last El Niño of this magnitude occurred in 1997–98, causing \$35 billion in destruction and 23,000 deaths around the world.³ The current El Niño is expected to be far worse.

In addition to impacting people’s food sources and livelihoods, El Niño-caused drought, flooding and/or high temperatures can also impact their health and well-being. Flooding can contribute to increased incidence of cholera, malaria and other mosquito-borne illnesses like Zika, because mosquitos breed in standing water.⁴ Contaminated water can also cause diarrhea, exacerbating malnutrition.

Integrated Phase Classification,

or IPC, is a set of standardized tools for classifying the severity and magnitude of food insecurity. This evidence-based approach uses international standards, allowing comparisons across countries and over time. It is based on consensus-building processes that provide decision-makers with a rigorous analysis of food insecurity and objectives for emergency response and development. For more information, see www.ipcinfo.org

IPC Phase 3 is characterized by (1) at least 20 percent of households having significant food consumption gaps or being marginally able to meet minimum food needs only by using irreversible coping strategies like liquidating livelihood assets, and (2) levels of acute malnutrition being high and above normal.

Heightened El Niño-related health risks



Wetter- or drier-than-normal conditions caused by El Niño bring about a variety of health risks. *Source: WHO*

El Niño’s impact on migration. A study on the relationship among violence, hunger and migration in Central America found that in 2014, “a significant percentage of households affected by the drought reported at least one family member migrating in search of a job.”⁵ With El Niño decimating many farmers’ crops in the “Northern Triangle” of Central America for the second or third consecutive year, migration is again expected to surge, whether to a neighboring town or to the United States.

Snapshot: Countries affected by El Niño where CRS is present

● PEOPLE IN NEED OF FOOD AID

GUATEMALA
Drought has led to poor harvests, unemployment, migration and the selling of productive assets. **P5**

HAITI
Drought and lack of water for agriculture have affected 1 million people. 3.8 million people are food insecure. **P7**

ETHIOPIA
Extreme drought for second consecutive year has led to failed crops and significant livestock losses; 10.2 million in need of emergency food aid. **P9**

EL SALVADOR, HONDURAS AND NICARAGUA
Dry Corridor has suffered extreme drought; depletion of household assets. **P6**

SOUTH SUDAN
After two failed planting seasons, drought has led to crop and livestock losses, exacerbating conflict and existing needs. **P11**

SUDAN
Extreme drought and flooding have led to crop and livestock losses; migration; and higher malnutrition and disease rates as a result of lack of clean water. **P10**

● **2.8 m**
GUATEMALA AND HONDURAS

ZAMBIA
Unpredictable rainfall has caused failed planting cycles, crop loss and increased vulnerability in certain areas. **P12**

UGANDA SOMALIA
KENYA
TANZANIA

ZIMBABWE
Drought has caused significant crop and livestock loss, causing 26 percent of the country to be food insecure. **P14**

BOTSWANA
MOZAMBIQUE

LESOTHO
Drought has caused 60 percent of the population to require emergency food aid, with severe depletion of animal livestock. **P13**

● **14 m**
SOUTHERN AFRICA
EXCL. SOUTH AFRICA

MADAGASCAR
Drought in the south, and flooding in the north and east, have caused food insecurity. **P14**

ECUADOR, PERU AND BOLIVIA
Increased rainfall has caused flash floods and resulted in deadly mudslides. **P8**

ASIA



TIMOR LESTE
Drought has caused livestock death and crop failure, leading to hunger, migration and conflict. **P15**

● **US\$76 M**
HEALTH COSTS OF EL NIÑO'S NEGATIVE EFFECTS
in Ethiopia, Uganda, Kenya, Somalia, Tanzania, Lesotho, and Papua New Guinea

CENTRAL AMERICA

Drought due to El Niño has impacted 3.5 million people in Central America's dry corridor, and 2.8 million people require food aid.⁶ At the beginning of last year's "primera" season, more than 65 percent of households had no food remaining.⁷ While food assistance, relatively stable grain prices and ongoing employment in the coffee sector have largely mitigated household hunger to date, food reserves are becoming depleted, and many households are expected to enter "crisis" mode, or IPC Phase 3 by March 2016.⁸

GUATEMALA

Context: Large rural population made up of indigenous groups who are already poor.

Problem: El Niño has caused drought leading to poor harvests, unemployment, migration and selling of productive assets.

Relevant CRS programs:

- USAID-funded Title II development project (\$36 million 2012-2018)
- USDA-funded Food for Education project (\$13 million 2013-2017)
- Buffett Foundation-funded agricultural project
- Private funding for emergency response (\$54,000 February-March 2016)

Proposed response:

- USAID-funded Title II emergency food response (\$5 million)
- Private funding for agricultural mitigation and adaptation (\$676,000 2016-2019)

Guatemala is a country of 15 million people, where agriculture employs over 40 percent of the labor force, mostly on small family farms. Roughly 70 percent of cultivated land is for food staples.⁹

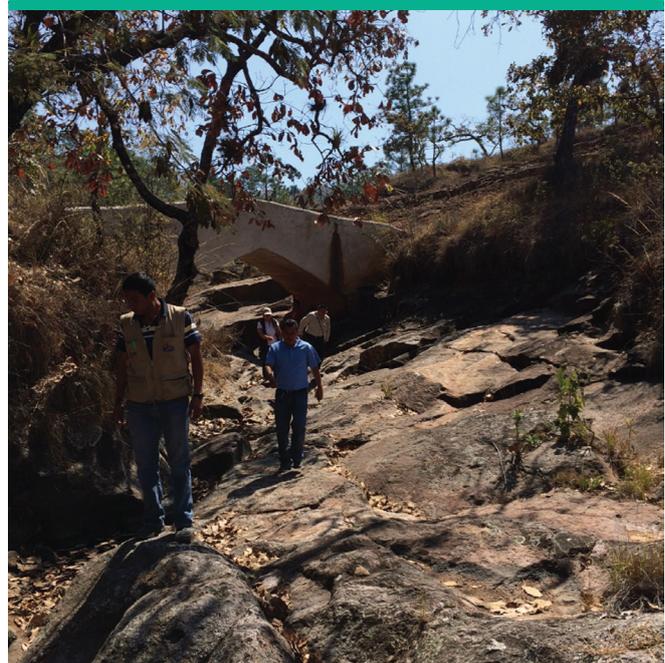
Drought-induced poor harvests have caused many day laborers to lose employment on larger farms, forcing many men to migrate increasingly further distances from their families in search of viable work. Many people have resorted to negative coping mechanisms including the selling off of productive assets and eating smaller meals fewer times a day,¹⁰ highlighting the gravity of the situation.

CRS programs that address the impacts of El Niño include a U.S.-funded Title II Development Food Assistance Program (DFAP) and a Buffett-funded agricultural project that works on improving soil- and water-management practices to help farmers build resilience to drought. The practice of capturing *green water* has shown to improve the resilience of crops to drought by between 5 and 10 days.

The DFAP, implemented in the Western Highlands, focuses on large, poor, rural and indigenous communities. The project distributes food rations to families and works with farmers to pursue small-scale irrigation schemes to capture rain for vegetable gardens.

3.5 million

PEOPLE IN CENTRAL AMERICA'S DRY CORRIDOR ARE EXPERIENCING DEVASTATING DROUGHT FROM EL NIÑO



CRS staff stand in what was once the community water source in Santa Lucia la Reforma, Totonicapán, Guatemala. Water usually reaches the top of the bridge, and does not dry until the end of the dry season (March/April). This year, the river dried in January.

The project also helps to address malnutrition and stunting in these areas through supplemental feeding for children. By applying adaptive management processes with support from USAID, the project has shifted interventions from the planned development activities to addressing the changed needs due to El Niño. Such adjustments will also help mitigate the impacts of this shock.

CRS has also developed an emergency response strategy for the acute food security crisis in the Dry Corridor. With support from private foundation funds, CRS is implementing a small project piloting food voucher and cash transfer mechanisms in February and March 2016 to buffer the impact of dramatically reduced food production. We also seek to scale our existing development project to reach 5,000 vulnerable families.

EL SALVADOR, HONDURAS AND NICARAGUA

Context: Ranking as some of the poorest countries in the region; very vulnerable to climate change.

Problem: The Dry Corridor suffered extreme drought in 2015, after two previous years of drought, which has led to a depletion of household assets.

Relevant CRS programs:

- USAID mission-funded cacao project in El Salvador (\$10 million 2014-2019)
- Buffett Foundation-funded cacao project in El Salvador
- USDA-funded Food for Education project in Honduras (\$17.7 million 2012-2020)
- USDA-funded Food for Progress in Nicaragua (\$11 million 2014-2019)
- Private foundation funding in Nicaragua for food vouchers to mitigate the immediate impacts (\$134,000 December 2015-March 2016)
- Keurig Green Mountain and Inter-American Development Bank project in Honduras (\$2.2 million)

Proposed response:

- Private foundation funding in Nicaragua for mitigation and adaptation (\$751,000 2016-2019)

Nicaragua, the second poorest country in Latin America, is one of the 10 countries most vulnerable to climate change.¹¹ Drought has severely affected the planting seasons and early estimates suggest 50 percent of the total planted area has been damaged, with complete crop losses in the country's most severely affected regions.¹² Similarly, in El Salvador and Honduras, 60 percent of maize crops were destroyed by irregular rainfall in early 2015.¹³ Honduras lost 80 percent of its bean crop. In El Salvador, losses are estimated at \$28 million in seeds, fertilizers, pesticides and land preparation. In July 2015, the Government of Honduras declared a state of emergency, requesting international humanitarian assistance.

CRS implements agriculture programs in Nicaragua, Honduras and El Salvador funded by the U.S. government and private foundations, working with farmers to address drought conditions that have already existed for 3 years. The programs work to help farmers generate *green water*, and manage soils to retain this moisture, thus extending the time crops can survive between rains.



The project also helps to address malnutrition and stunting through supplemental feeding for children.

Nicaragua is one of the 10 countries most vulnerable to climate change.

Green water

The rainfall and water that is stored in the soil as soil moisture.

THE CARIBBEAN

In the Caribbean, El Niño has caused drought, leading to agricultural, economic and social impacts. Haiti has been hit especially hard.

HAITI

Context: Still rebuilding after a devastating 7.0 magnitude earthquake in 2010; poorest country in the Americas.

Problem: Drought and lack of water for agriculture and livestock; 3.8 million people are food insecure, with 1 million affected by El Niño drought.¹⁴

Relevant CRS programs:

- Inter-American Development Bank-funded cacao project (\$1.2 million 2014-2017)
- International Fund for Agricultural Development-funded crop and soil project (\$100,000 2015-2016)
- OFDA-funded project (\$850,000)
- World Bank-funded project (\$500,000)
- MAECD (Canadian Development) funded project (\$3 million)

Proposed response:

- USAID-funded project (\$5 million)

Haiti is still rebuilding after the devastating 2010 earthquake. It is the poorest country in the Americas, with almost 60 percent considered poor. Sixty percent of the population are farmers, with one in five living solely off of their land.

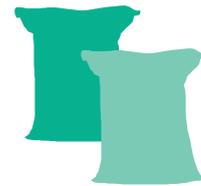
El Niño has resulted in virtually no rain and extreme drought, which has decimated staple crops around the country. Water availability has been a major concern, both for drinking water for people and animals, and for agriculture. The latest government reports in Haiti indicate that up to 560,000 people are in urgent need of food assistance in 37 “communes” because extreme drought has led to low agricultural yields, which in turn have reduced food availability and increased food prices.¹⁵ Imported food is available, but the falling value of the Haitian currency is weakening households’ purchasing power. The country expects the impacts of El Niño to continue to the year’s end, which will only make the current situation worse.

CRS implements a cacao program funded by the Inter-American Development Bank in an area that, due to the project, has been able to withstand major impacts from the drought. Our work has focused on improving agricultural practices in tree crops and, through research in coordination with the International Center for Tropical Agriculture, seeks broader uptake by vulnerable households of nutrient-rich foods, like beans and cassava, which are also drought- and heat-resistant.

In response to El Niño, CRS is working alongside partners to build government capacity, engaging early warning systems, teaching conservation agriculture techniques, and implementing cash transfers for emergency relief. We are also addressing the impacts of El Niño on maternal and child health through a health and nutrition project. We are also seeking funds to implement an electronic voucher program to address food security needs.

3.8million

PEOPLE ARE FOOD INSECURE
IN HAITI



*Imported food is available,
but the falling value of
the Haitian currency is
weakening households’
purchasing power.*

SOUTH AMERICA

BOLIVIA, ECUADOR AND PERU

While El Niño has not caused the extreme weather expected in this region, increased rainfall in Bolivia, Ecuador and Peru has caused a number of flash floods, resulting in deadly mudslides. Temperatures have also risen above normal. The Government of Peru declared a state of emergency in 14 provinces in July 2015. In November, the Ecuadorian National Government declared a state of emergency for 17 provinces that faced floods which had destroyed houses and displaced many people.

El Niño is having an impact on the agricultural sector, particularly in Peru. The regions affected are also key fishing and mining areas, which have also been impacted by El Niño.

CRS and its local partners are meeting the basic needs of those affected, through market-based responses, including cash and voucher programs to address food, water and sanitation needs. Specifically in Beni, Bolivia, and in Esmeraldas, Ecuador, CRS is helping communities to develop preparedness plans to enable displaced families, refugees and host families to rapidly mobilize to safe zones in the event of major weather events, such as flooding and landslides. We are also engaged in training CRS and partner staff in pre-crisis market analysis of water and sanitation supplies, food and household items. Should El Niño's impacts in the area become more extreme, we will be prepared to utilize market-based responses.

Problem: Flooding, but not (to date) to the extent expected.

Relevant CRS programs:

- ECHO-funded resilience project in Bolivia (\$110,000 2015-2016)
- CRS-funded WASH project in Bolivia (\$4.6 million 2009-2016)
- Buffett-funded agriculture project in Ecuador (\$2.5 million 2011-2016)

Temperatures have risen above normal, and increased rainfall has caused flash floods, resulting in deadly mudslides.



EAST AFRICA

El Niño has caused increased rainfall in parts of Ethiopia, Kenya, Somalia and Uganda, and persistent drought in parts of Eritrea, Ethiopia, South Sudan, northern Uganda and in the north-western and north-eastern parts of Somalia.¹⁶ The humanitarian impact of El Niño is expected to last well into 2016, against a backdrop of a wider humanitarian crisis.¹⁷ The geographic confluence of sustained conflict levels and localized economic shocks particularly in South Sudan continue to exacerbate humanitarian needs. “This underscores the need to plan and resource now for recovery from both floods and drought ... to increase funding to both short-term response needs and resilience interventions.”¹⁸

ETHIOPIA

Context: Large population of rainfed agriculturalists or pastoralists.

Problem: Significant drought for second consecutive year has led to failed crops and significant livestock losses; 10.2 million people are in need of emergency food assistance.

Relevant CRS programs:

- USAID-funded Title II emergency/development project (\$240 million 2016)
- OFDA-funded emergency response (\$4 million 2015)
- UN-funded recovery project (\$2.5 million 2015)

Of Ethiopia’s population of about 90 million, the vast majority are smallholder farmers and pastoralists. Approximately 85 percent of agricultural production is rainfed.

Ethiopia has been one of the countries hardest hit by El Niño, which has caused significant drought in the central and eastern highlands where a large portion of the country’s population live. These regions are also prime agricultural areas and pasture land for livestock.

Due to El Niño, both rainy seasons failed in 2015 and many smallholder farmers have seen significant decreases in their yields over the last year. Some saw zero production in 2015 and pastoralists have lost hundreds of thousands of livestock.¹⁹ Given the situation, the Government of Ethiopia has appealed for \$1.4 billion for 10.2 million people affected by the current drought. Of this request, \$1.2 billion is urgently needed for food assistance.²⁰

CRS operates the United States’ primary Title II emergency food assistance program in Ethiopia – the Joint Emergency Operations Program, or JEOP, which coordinates with the emergency operations of the World Food Program and the Government of Ethiopia. CRS’ JEOP typically serves about 680,000 people in its geographic areas, but due to El Niño, these numbers will increase to about 2.5 million. CRS will extend its JEOP program until September 2017, with an additional \$81 million in commodities and cash. CRS will make additional proposals based on an additional assessment of needs after July 2016.

In East Africa, the humanitarian impacts of El Niño will last well into 2016 against a backdrop of wider humanitarian crisis.

10.2million

PEOPLE NEED FOOD ASSISTANCE, MAKING ETHIOPIA ONE OF THE COUNTRIES HARDEST HIT BY EL NIÑO



When this photo was taken, there had been no rain in Miso county for more than a year and many children had dropped out of school because of severe water shortages. Photo by Kim Pozniak/CRS

SUDAN

Context: Existing food insecurity; ongoing conflict between agriculture and pastoralists; disparities in services across country.

Problem: Extreme drought and then flooding has led to crop and livestock losses; migration; and higher rates of malnutrition and disease as a result of lack of clean water.

Relevant CRS programs:

- DFID-funded resilience project in consortia (\$18.3 million 2014-2016)
- CRS-funded agriculture and nutrition project

Proposed response:

- DFID-funded add-on El Niño response (\$3.77 million 2016)

Of Sudan's 39 million people, almost half are poor, and two-thirds live in rural areas.²¹ While oil has been the country's primary source of income, agriculture and livestock are essential to its economic diversification. Nearly two decades of internal conflict have caused wide disparities in wealth and poor social service delivery to the periphery states, including Darfur and Kordofan.

El Niño has caused a significant lack of rainfall in Sudan, while in some parts of Darfur and Kordofan, heavy rainfall has resulted in flooding. Livestock losses have also been substantial. In the short term, lower local food availability and reduced income for rural families means an intensified lean season this year. Changing livestock migration patterns will increase intercommunal conflicts, crop destruction and disease outbreaks. Market prices are also at risk of high volatility.

In the longer term, the impacts of El Niño point to higher food prices due to poor production of agriculture and livestock. The early onset of this year's lean season is expected to lead to further deterioration of nutrition, especially among vulnerable children under 5 years old and pregnant and nursing mothers.²² Water shortages will increase peoples' vulnerability to waterborne infections and disease. Displacement or migration for labor, food and pasture; subsequent disruption of schooling; and an increase in negative coping strategies, such as charcoal making, fuel wood collection, or traditional mining are all expected to increase.

CRS is providing emergency food assistance to 300,000 people with the WFP and is supporting ongoing disaster-preparedness work. We also seek to expand a DFID-funded resilience project to help households cope with and withstand shocks resulting from poor harvests, prevent malnutrition and contribute to the reduction of resource-based conflicts.



Changing livestock migration patterns will increase intercommunal conflicts, crop destruction and disease outbreaks.

SOUTH SUDAN

Context: Civil conflict since December 2013; high rates of food insecurity and malnutrition.

Problem: After two failed planting seasons, El Niño-caused drought has led to crop and livestock losses, exacerbating conflict and existing needs.

Relevant CRS programs:

- USAID-funded Title II development/emergency project (\$10.5 million 2012-2015)
- WFP emergency food assistance (\$2.3 million 2015)

Independent from Sudan since 2011, South Sudan has faced civil war since December 2013. While a peace agreement was signed in December 2015 and the government slowly moves to create a transitional government, conflict still continues in pockets of the country. More than 2 million people are displaced, and 4.6 million in need of food assistance.²³

El Niño has caused rains to start early and then stop, resulting in widespread failure of crops, including maize, groundnut and vegetables. Livestock are dying for lack of water and fodder, and pastoralists have moved into non-traditional dry-season areas, causing additional conflict among people.

CRS has distributed food and livelihoods inputs through a USAID-funded project that shifts between emergency and recovery work according to needs. In response to El Niño, the project provided food assistance, seeds and tools to help with recovery from the failed planting season. CRS also engaged in direct food distributions in partnership with the WFP.



While a peace agreement was signed in December 2015 and the government slowly moves to create a transitional government, conflict still continues in pockets of the country.

SOUTHERN AFRICA

The effects of El Niño are becoming increasingly acute throughout Southern Africa, with October/November 2015 seasonal rains having arrived 10 to 50 days late, a 60 to 80 percent precipitation deficit and above-average temperatures. October to December 2015 was the driest season on record for parts of central South Africa, Botswana, Zimbabwe, central Mozambique and central Zambia.

An estimated 2.5 million people are already classified as “in crisis” (IPC Phase 3) for the first quarter of this year in Lesotho, Madagascar, Malawi, Mozambique, and Zimbabwe. As El Niño is expected to last another 4 to 6 months, this figure is expected to double by the end of the year. The WFP predicts that up to 14 million people across the region could experience food shortages this year.²⁴

Staple food prices are expected to increase due to low production, and drought threatens to delay this year’s harvest, thereby extending the current lean season.²⁵ Thousands of food-insecure households are likely to face severe nutritional challenges throughout the region towards the second half of the year, with a very plausible specter of famine and starvation for many people.

Proposed regional response:

- USAID-funded Title II emergency project (\$12 million 2016)

ZAMBIA

Context: Agricultural sector that lacks inputs and links to infrastructure; historical impacts of HIV/AIDS.

Problem: Unpredictable rainfall has caused failed planting cycles, crop loss and increased vulnerability in certain areas of the country.

Relevant CRS programs:

- USAID-funded Feed the Future project (\$9.5 million 2012-2017)

Zambia is a land-locked country of almost 16 million people with three-quarters characterized as poor and half as extremely poor.²⁶ Agricultural productivity has historically been challenged by lack of access to input and services, as well as to transport, markets and other social infrastructure. HIV/AIDS also took its toll on the country in the 90s, and the poor continue to be vulnerable to sickness and death. In areas where agriculture is the main sector, 70 percent are poor.²⁷

Lusaka, and the Eastern, Western and Southern provinces of Zambia are reporting below-normal rainfall and a delay to the start of the heavy rains. Rivers and dams are at critically low levels. Rainfed crops, especially maize, the staple food, have not matured fully.

CRS and local partners are conducting a needs assessment to identify and evaluate the impacts of El Niño and weather variation on beneficiary livelihoods in the Eastern, Western and Southern provinces. CRS is coordinating response efforts with the Disaster Mitigation and Management Unit (DMMU), the National Meteorological Center for data, and the Ministry of Agriculture. CRS is also a member of the national Climate-Smart Agriculture (CSA) consortium working to improve farmers’ adaptive capacity to respond to climate variability. CRS will seek additional programming funds to help safeguard farmers through seed security systems, focusing on nutrition and administering market-based recovery projects.

2.5 million

PEOPLE IN SOUTHERN AFRICA
ARE IN FOOD CRISIS AND
THIS NUMBER COULD DOUBLE
BY THE END OF THE YEAR



*Rainfed crops, especially
maize, the staple food,
have not matured fully.*

LESOTHO

Context: 90 percent of farmers practice subsistence farming and struggle to access inputs.

Problem: Drought has caused 60 percent of the population to require emergency food assistance, with severe depletion of animal livestock.

Lesotho is a small country of 2.1 million people where agriculture is the primary source of income for more than half of the rural population. Approximately 90 percent of farmers practice subsistence agriculture and struggle to access agricultural inputs, especially quality seeds.

The Government of Lesotho has declared a state of emergency due to exacerbated drought conditions. In much of the country, rains arrived 50 days late, resulting in most farmers failing to plant maize, the staple crop, and very poor yields for those who did. Approximately 725,000 people are likely to be affected, with 338,000 requiring immediate food and cash assistance. El Niño will impact food security and agriculture, water, health and nutrition as well as migration, protection and security. Reports of increased incidences of diarrhea outbreaks in children, livestock death, and rising food prices have significantly increased. Many poor and vulnerable farmers who normally rely on income from casual labor will lose their livelihoods.



A maize field, top, planted in November 2015 showing very poor germination, and a maize field left fallow, above; both are the result of extreme drought conditions. Mohale's Hoek, Southern Lowlands, Senqu River Valley. Photo by M. Mothunyane/CRS



CRS staff participated in a joint nationwide assessment led by the government's Disaster Management Authority and a nationwide market assessment led by the WFP. CRS is realigning private livelihood resources to support immediate responses including procurement of vegetable seeds, seeds for livestock fodder, shade nets for 1,000 households and water purification tablets. We are also undertaking nutrition education and hygiene promotion for 5,000 households, and training on El Niño-specific grazing practices, natural resource management, and integrating disaster risk reduction messaging. CRS seeks additional funding to support 7,000 households through voucher-for-work, keyhole vegetable gardening and input fairs. CRS is also collaborating with a local university to install rainwater catchment systems, while an ongoing project facilitates growth-monitoring, immunization, and micronutrient supplementation of vulnerable children, as well as nutrition education, and WASH education for parents.

A keyhole gardener, above left, growing vegetables during extreme drought conditions (January 2016) and a keyhole vegetable garden, approximately 3 weeks after the first significant rains of the cropping season (February 2016). Mohale's Hoek, Southern Lowlands, Senqu River Valley. Photo by M. Mothunyane/CRS

MADAGASCAR

Context: Largely agrarian population highly vulnerable to natural disasters.

Problem: Drought in the south, and flooding in the north and east, have caused food insecurity.

Relevant CRS programs:

- USAID-funded Title II development project (\$38 million 2014-2019)
- OFDA-funded project (\$785,000 2015-2016)
- EU-funded development project (\$1.8 million 2014-2017)
- CRS-funded food distribution (\$100,000 February 2016)

Madagascar, an island country, is highly vulnerable to natural disasters including cyclones, droughts and floods. More than three-quarters of families earn a living from agriculture,²⁸ while the malnutrition rate is one of the worst globally.²⁹ Drought caused by El Niño in the south has caused an early lean season exacerbated by early exhaustion of food stocks, reduced coping capacity from the previous lean season and unusually high staple food prices.

With conditions worsening, U.S. Ambassador to Madagascar Robert Yamate, hosted by CRS, visited the emergency situation in the south. CRS is undertaking a rapid assessment in coordination with other actors to inform how beneficiaries have used seeds from past fairs, how the food security situation has worsened and to monitor communities' access to food/water in the immediate future. CRS is employing a multi-donor coordinated response to the drought situation in the south with contributions from the Gates Foundation, the European Union, USAID and CRS private funds.

ZIMBABWE

Context: Poor agricultural systems and environmental degradation.

Problem: Drought has caused significant crop and livestock loss, causing 26 percent of the country to be food insecure.

As a result of the 1990s economic crisis, Zimbabwe's poverty rate has grown to 72 percent and agricultural production has suffered due to weak support services, lack of credit and acute shortages of essential agricultural inputs.³⁰ Yet smallholder farmers produce the bulk of the food in the country.³¹ Drought in dry areas has significantly reduced farmers' productivity, and millions have been dependent on food aid already. Farmers also face environmental challenges including deforestation, land degradation and soil erosion.

In February, the Government of Zimbabwe declared a state of disaster, as 95 percent of the country had received less than 75 percent of expected rainfall, dams were at an average 50 percent deficit, and boreholes were gradually drying up as a result of El Niño. An estimated 1.5 million rural Zimbabweans were already food insecure and, with the onset of El Niño, that number reached just above 2.4 million people (26 percent of the population). Livestock deaths have also been significant.

Severe food shortages have forced households to survive on wild fruit or one meal a day. Drought conditions during the last planting season have meant a minimal or absent maize harvest for many farmers. Zimbabwe has been forced to import maize, the regional staple, to provide for citizens' subsistence needs. The government indicated \$260 million would be needed to support grain imports to meet national food security needs. CRS has conducted 4 seed fairs and 13 seed distributions in the Mudzi district, reaching 5,991 households comprising 24,563 beneficiaries. The seed fairs distributed drought-tolerant cereals and legumes such as sorghum, cowpea, and groundnuts. CRS is also collaborating with the WFP to discuss potential resource mobilization to support and scale up response efforts.

More than three-quarters of families earn a living from agriculture, while the malnutrition rate is one of the worst globally.

The government declared a state of disaster, with 2.4 million, or more than a quarter of its population food insecure.



This woman was digging meters below the surface at this watering hole for the last dregs. The next water source is hours away by foot. "Tell people what is happening here," she said.

Photo by Nancy McNally/CRS

ASIA

TIMOR-LESTE

Context: Small agrarian country with high rates of poverty and malnutrition.

Problem: Drought has caused livestock death and crop failure, leading to hunger, migration and conflict.

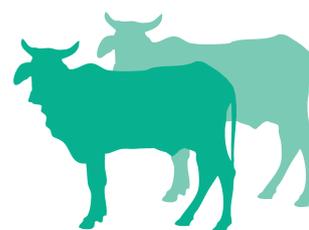
Relevant CRS programs:

- Food Resources Bank (\$390,000 2014-2017)
- OFDA-funded seed project (\$900,000 2013-2016)
- Japan-funded nutrition project (\$3.85 million 2014-2017)
- CRS-funded keyhole garden component (\$90,000 2014-2017)

East Timor is a small country of 1.2 million, with half of the population living in poverty and half of the children malnourished.³² The majority of the workforce is engaged in agriculture, most of which is subsistence-level.³³

Areas in Timor-Leste are experiencing extreme drought, the north more affected than the south. Rainfall has been at 50 percent of normal amounts causing livestock to get sick and die due to a lack of feed and reduced water supply. The drought has also led to a delay in the planting of rice fields, and a number of crops have died due to lack of water. Farmers have been unable to plow fields due to sickness or death among draft animals. Families in drought areas are reporting hunger, an increase in migration to the capital, as well as risk of conflict.

CRS has engaged the community around El Niño through messaging and the training of staff and partners. We are also coordinating with peer agencies and national agriculture extension officers to collect data on the impacts of El Niño.



Rainfall has been at 50 percent of normal amounts causing livestock to get sick and die due to a lack of feed and reduced water supply.



U.S. GOVERNMENT RESPONSE

The U.S. government has scaled up its three-track response to El Niño through the Agency for International Development (USAID):

- 1. Activating built-in mechanisms to inject emergency funds into development programs** in places facing recurring emergencies. These funds enable households to meet their immediate needs without selling assets—such as livestock—that provide a source of income.
- 2. Mobilizing humanitarian assistance to the most-affected people.**
- 3. Adjusting development efforts** to mitigate the impact of El Niño and accelerate recovery once drought and flood conditions subside. It also supports long-term planning to make communities more resilient to El Niño and climate-related shocks.

USAID's Office of U.S. Foreign Disaster Assistance has been monitoring the effects of El Niño to assess humanitarian needs and coordinate responses with affected governments and humanitarian partners. Since the onset of El Niño, OFDA has continually issued project funds to respond to the variety of weather-related shocks. OFDA does not issue such funds unless a nation's government has made a formal declaration of emergency or disaster.

THE WORK OF CRS

Through U.S. government, foundation and private resources, CRS, in collaboration with local partners, has been preparing for, assessing and responding to the impacts of El Niño in the countries where we work. Our program activities range from direct distributions of food, agricultural inputs and water purification tablets to market-based approaches using vouchers to help households meet their needs. We have also engaged communities in longer-term adaptations to drier climates, including improved water and soil management, the use of drought-tolerant seed varieties and improved agricultural practices.

CRS has also engaged with other groups to help assess communities' needs and response to El Niño. We have collaborated with the global Food Security Cluster, made up of international NGOs, the International Red Cross and Red Crescent Movement, the World Food Program and the Food and Agriculture Organization, to foster a joint understanding of the additional food security needs of people around the world due to El Niño. We have also hosted U.S. government delegations in many of the most-affected countries, including Guatemala and Ethiopia.

POLICY RECOMMENDATIONS

To respond to the immediate needs of the millions who have been impacted by El Niño, CRS calls on the U.S. government to take these urgent steps:

- 1. Bolster funding support for countries most impacted by El Niño.** In areas where large numbers of people already require food assistance, El Niño has increased these needs significantly. The United Nations reports that over 60 million people will be impacted by El Niño in the most-affected regions, and 17 million will be in crisis situations by the end of 2016: 2.8 million in Guatemala and Honduras, 10.2 million in Ethiopia and 14 million in southern Africa.³⁴



OFDA has been monitoring the effects of El Niño to assess humanitarian needs and coordinate responses with affected governments and humanitarian partners.

A [2012 report](#) comparing U.N. data on the cost of providing lifesaving support with evidence of the economic impact of drought found that an early response could save an estimated \$8 million each day.³⁵ Funding should be disbursed as quickly as possible, before the next planting season, to mitigate the negative impacts of El Niño to avoid large-scale crises.

Considering the principles of the USAID Resilience Policy and Guidance,³⁶ funding for El Niño response should be *additive*, as well as integrated, layered and sequenced with ongoing development projects. Similarly, as El Niño calls for programs to address an increasingly complex set of issues, coordination among humanitarian and development actors must be further strengthened to ensure efficient use of resources.

- 2. Provide flexibility and use appropriate assistance mechanisms to optimize funding resources.** Where food is available locally, using market-based mechanisms for food assistance enables more efficient use of humanitarian funding. Where food is not available locally, such as in Ethiopia, internationally or regionally sourced food assistance should be provided. With such significant and global need, Congress should allow the use of the Bill Emerson Humanitarian Trust, which was created for events like this unfolding crisis.

Where there are existing development projects, continue to adjust and adapt management strategies to optimize assistance with the funding provided. In Guatemala, CRS worked with USAID to adjust our Title II development program to respond to the communities' changing needs due to El Niño. With the adjustments, we are shifting from in-kind food assistance to cash vouchers, employing a uniform strategy for behavior change, renewing our focus on water, sanitation and hygiene, and income-generating activities, while continuing to prioritize the poorest of the poor.

El Niño has impacted many countries with various agricultural development and nutritional needs, so we must provide the flexibility to respond appropriately. One example of a successful and flexible methodology is CRS' DiNER, or Diversification for Nutrition and Enhanced Resilience fairs, approach, which has been successful in Guatemala and Zambia. DiNER fairs use vouchers geared to a diverse set of farmers: They can choose crops according to their needs, meeting short-term needs while also stimulating sustainable change, such as promoting future supply channels for seed. DiNER fairs also invite strong private sector involvement.

- 3. Address the health impacts of El Niño, including preventing malnutrition through feeding centers for children and nursing mothers.** Severe drought, flooding, heavy rains and increases in temperature from El Niño can lead to food insecurity and malnutrition, disease outbreaks, acute water shortages and disruption of health services. Countries that experienced flooding are facing cholera outbreaks, while other animal, insect and waterborne diseases are becoming more prevalent. People living with HIV and AIDS require sufficient calories for their medication to work, which can be problematic when food crises loom.

Where food is available locally, using market-based mechanisms for food assistance enables more efficient use of humanitarian funding.



Countries that experienced flooding are facing cholera outbreaks, while other animal, insect and waterborne diseases are becoming more prevalent.

Already, the health costs of seven of the high-risk countries—Ethiopia, Uganda, Kenya, Somalia, Tanzania, Lesotho, and Papua New Guinea—coping with the negative effects of El Niño have totaled \$76 million.³⁷ The donor and response community must prepare for and address the health impacts of El Niño.



Coordination and cooperation between countries and across regions will be essential to ensuring that responses are appropriate and do not exacerbate the risks to, or vulnerabilities of, specific communities.

- 4. Engage in regional cooperation.** The weather impacts of El Niño occur across national borders, causing people to migrate in search of water, other resources and opportunities to earn a living. Therefore, coordination and cooperation between countries and across regions will be essential to ensure that responses are appropriate and do not exacerbate the risks to, or vulnerabilities of, specific communities.
- 5. Use and strengthen early warning systems.** Many countries facing the impacts of El Niño have early warning systems supported by funding from the U.S. government. Donors should continue to support such activities using available technology. For example, a CRS USAID-funded resilience project in Ethiopia uses short message system, or SMS, technology to disseminate weather forecasts so farmers can adjust quickly and appropriately. Such early warnings can help people build resilience and reduce their disaster risks.

In addition, we encourage the U.S. government to take the following steps over the long term to reduce the likelihood of, and prepare for, future extreme weather events:

- 1. Address the lasting impacts of El Niño.** Despite reports that the height of El Niño will be over by the second quarter, its impacts will not be short-lived. Many of the hardest hit countries are experiencing El Niño following one or two seasons of drought or other extreme weather conditions that have depleted people's resources and coping strategies. Therefore, recovery and resilience activities should be part of any response plan, to ensure that the most vulnerable can meet their immediate needs and recover their livelihoods and other means of survival over the long term. This means providing alternatives to environmentally harmful coping strategies—such as gathering firewood and making charcoal—that many households are using.

Furthermore, so-called “neutral” and La Niña climate conditions are equally likely to occur in the second half of the year.”³⁸ Historically, when La Niña follows an El Niño, there can be “even greater overall humanitarian impact on average” than with El Niño, because people's ability to cope has already been weakened.”³⁹ Long-term investment will help prevent subsequent emergency situations resulting from La Niña.

- 2. Address the underlying issue of climate change.** In recent years, the impact of climate change appears to be intensifying the effects of the El Niño/La Niña phenomena, leading to more severe drought, heat waves and flooding, and expanding the geographic area impacted.⁴⁰ Therefore, while addressing the immediate needs of the most affected, donors must also continue to grow investments in climate-smart agriculture, which includes techniques to adapt to and mitigate the impacts of climate change.

CRS employs climate-smart agriculture in many countries to help the most vulnerable mitigate the impacts of climate change. We provide farmers with alternatives to adapt their agricultural practices, help them focus on water and soil management and use innovative natural resource management. For example, CRS' USAID-funded development project in Malawi helped communities better prepare for and manage climate-related risks by working closely with local governance structures and using monitoring and evaluation exercises. It also conducted soil- and water-conservation treatments on almost 5,000 acres. As a result, despite repeated incidences of flooding, drought and strong winds, only 7 percent of households experienced livelihood asset losses due to shocks and stresses—a 13 percent reduction from the baseline. In another case, CRS arranged for farmers in Madagascar to learn from Zambian farmers about conservation agriculture using “fertilizer trees.” The trees produce a leafy canopy during the dry season but not in the rainy season, so crops receive full sun and rich natural fertilizer.



We provide farmers with alternatives to adapt their agricultural practices, help them focus on water and soil management and use innovative natural resource management.

- 3. Make funding long term, integrated and flexible to build resilience among the most vulnerable.** Both the funding amount and duration to carry out DRR projects are insufficient. Extending DRR project timelines can allow for activities like environmental risk mitigation and natural resource management, which take time but have helped people limit their vulnerabilities to drought and flooding. Longer time frames also allow for behavior change, which is an important part of successful risk reduction.⁴¹ Further, flexible funding can allow for timely market-based responses that can support communities prone to the effects of climatic shocks more appropriately.



Annex 1: CRS activities to prepare and respond to El Niño

Country	Probable El Niño situation	Preparedness activities	Response activities	Budget (approximate)
Bolivia	<ul style="list-style-type: none"> Erratic rainfall, flooding (interior Amazon) Drought (eastern plains) 	Technical field visits for assessments (in Amazon)	WASH interventions (hygiene kit distributions through cash/vouchers, latrines, procurement of safe water sources)	
Central American Zone (Jamaica, Grenada, and St. Lucia)	<ul style="list-style-type: none"> Drought 	Engagement of Youth Emergency Action Committees (YEACs) on disaster preparedness within marginalized and/or urban areas	Additional capacity-building support to YEACs and communities on water-harvesting techniques and safe water storage	
Ecuador	<ul style="list-style-type: none"> Erratic rainfall, flooding (coastal areas) Drought (in the Sierra and highlands) 	Food vouchers, joint assessments on rural and peri-urban livelihoods, EMMAs	Food vouchers, WASH (market-based approach)	\$675,000 (pending)
El Salvador	<ul style="list-style-type: none"> Drought 			
Ethiopia	<ul style="list-style-type: none"> Drought 	Food assistance	Food assistance	<ul style="list-style-type: none"> USAID \$240 million
Guatemala	<ul style="list-style-type: none"> Erratic rainfall / drought 	Early warning systems	Food vouchers, nutritional messaging and behavior change, WASH, conservation agriculture	<ul style="list-style-type: none"> Private \$61,842 OFDA \$134,302 (pending) USAID \$ 7,092,306 (pending) <p>Total: \$7,288,450</p>
Haiti	<ul style="list-style-type: none"> Drought Crop failure Erratic rainfall Flooding Potential for strong hurricane season 	Capacity-building of government civil protection at the departmental and communal levels; early warning systems; conservation agriculture; agricultural research	Cash transfers for emergency relief; maternal and child health and nutrition project; potential Food For Peace e-voucher program	<ul style="list-style-type: none"> OFDA \$850,000 World Bank \$500,000 IDB 1.2 million IFAD \$100,000 MAECD (Canada) \$3 million USAID, up to \$5 million (pending)
Honduras	<ul style="list-style-type: none"> Drought 	Conservation agriculture, soil and water management	Capacity-building support to farmers and local government on soil and water management practices for rainfed crops; development of tools based on soil moisture to predict the effects of drought	OFDA \$150,000 (pending)
Lesotho	<ul style="list-style-type: none"> Drought Crop failure Livestock losses 	Keyhole vegetable gardening and livestock fodder production; training on El Niño-specific grazing practices and natural resource management; DRR messaging integrated into all livelihoods activities	Food security and vulnerability assessment, with the WFP (Feb 2016); WFP-led market assessment (Feb/Mar 2016); Voucher-for-work, keyhole vegetable garden, and DiNER fairs; rain-water harvesting and water purification; child health monitoring	<ul style="list-style-type: none"> Private \$85,954 to date with more based on need OFDA \$3,491,796 (pending) Betterway \$22,153

Madagascar	<ul style="list-style-type: none"> • Drought • Crop failure • Cricket infestation (south and southwest) • Floods (north, east) 	Seed vouchers/fairs, rapid assessment	Food assistance - direct distribution, child malnutrition program	<ul style="list-style-type: none"> • Gates \$464,000 • OFDA \$784,000 • Food for Peace \$300,000 • EU \$1.8,000 (*partial use for emergency) • Private \$100,000
Nicaragua	<ul style="list-style-type: none"> • Erratic rainfall 	Early warning systems; conservation agriculture; water management; preparation of family disaster management plans (see attached example); coffee renovation for coffee leaf rust	Provision of drought-resilient seed and technical assistance	<ul style="list-style-type: none"> • \$842,681 • Private \$550,591 • Other \$292,090 • Another private \$98,463
Peru	<ul style="list-style-type: none"> • Erratic rainfall • Flooding (northern coastal areas). • Drought (in southern Sierra and highlands) 	Potential livelihood assessment for Feb 2016	Potential seed or livelihood asset fair/ voucher	
South Sudan	<ul style="list-style-type: none"> • Drought 			
Southern Africa region	<ul style="list-style-type: none"> • Drought 			<ul style="list-style-type: none"> • USAID \$12 million
Sudan	<ul style="list-style-type: none"> • Drought 	Cash-for-work (payment with commodity vouchers): 13,853 households	IGA: 811 households Livestock support: 3,000 households Agriculture: 7,743 households	<ul style="list-style-type: none"> • DFID \$4 million
Timor Leste	<ul style="list-style-type: none"> • Drought 		Seed and food security assessment (Feb-March 2016)	

Zambia	• Drought (uncertain if linked to El Niño)		Food security assessment (Jan 2016)	
Zimbabwe	• Drought			

ENDNOTES

1. "El Niño Fact Sheet - U.S. Agency for International Development." Accessed February 18, 2016. <https://www.usaid.gov/el-nino/el-ni%C3%B1o-how-usaid-preparing-and-responding-globally>
2. Hood, Marlowe. "Record El Nino, climate change drive extreme weather." *Phys.org*, December 28, 2015.
3. "The Economist explains: What is El Niño?". *The Economist*, August 25, 2015.
4. McDonnell, Tim. "Is El Niño to blame for the "Explosive" Zika virus outbreak?" *Mother Jones*, January 28, 2016.
5. *Hunger without borders: The hidden links between food insecurity, violence and migration in the Northern Triangle of Central America; An exploratory study*. International Organization on Migration and World Food Program, 2015.
6. "El Niño: 2.3 million Central Americans will need food aid, UN warns in latest alert." U.N. News Centre, November 12, 2015.
7. Ibid.
8. "Food security outlook update: Nicaragua." FEWSNET, last modified January, 2016, <http://www.fews.net/central-america-and-caribbean/nicaragua>
9. "Rural poverty in Guatemala" Rural Poverty Portal. Accessed February 18, 2016 at: <http://www.ruralpovertyportal.org/country/home/tags/guatemala>
10. Household survey conducted by CRS of 500 families in Guatemala.
11. Silva, Jose Adan. "El Niño triggers drought, food crisis in Nicaragua." Inter Press Service, July 10, 2014.
12. "Major crop losses in Central America due to El Niño." September 14, 2015. Accessed online at: <http://www.fao.org/news/story/en/item/328614/icode/>
13. Ibid.
14. "Caribbean: Drought - 2015-2016." Reliefweb. Accessed February 18, 2016 at: <http://reliefweb.int/disaster/dr-2015-000091-hti>
15. "Latin America and the Caribbean: El Niño, rains and drought (September, 2015)." Red de Informacion para America Latina y el Caribe, September 22, 2015. http://www.redhum.org/documento_detail/17408
16. Press Release: El Niño impact in Eastern Africa continues to require highest level of investment in preparedness and response. OCHA and IGAD. December 23, 2015. <http://reliefweb.int/report/world/el-ni-o-impact-eastern-africa-continues-require-highest-level-investment-preparedness>
17. Ibid.
18. Ibid.
19. Iaccino, Ludovico. "El Niño: Ethiopia making 'every effort' to mitigate devastating drought as 10 million at risk." *International Business Times*, January 25, 2016. <http://www.ibtimes.co.uk/el-nino-ethiopia-making-every-effort-mitigate-devastating-drought-10-million-risk-1539886>
20. "OCHA Ethiopia Weekly Humanitarian Bulletin, 8 February 2016," Reliefweb. Accessed online at: <http://reliefweb.int/report/ethiopia/ethiopia-weekly-humanitarian-bulletin-8-february-2016>
21. "Sudan: Overview." World Bank. Accessed February 18, 2016 online at: <http://www.worldbank.org/en/country/sudan/overview>
22. Sudan Inter-Sector Coordination Group (ISCG) El Niño Response Strategy paper.
23. "OCHA South Sudan Humanitarian Dashboard." Reliefweb, January 5, 2016. http://reliefweb.int/sites/reliefweb.int/files/resources/ss_humanitariandashboard_20160105.pdf
24. "Malawi facing worst food crisis in decade, requires \$81 million in relief aid - UN agency." U.N. News Centre, September 25, 2015.
25. Ibid.
26. "Rural poverty in Zambia." Rural Poverty Portal. Accessed online February 18, 2016 at: <http://www.ruralpovertyportal.org/country/home/tags/zambia>
27. "Overview: Zambia." World Bank. Accessed online February 18, 2016 at: <http://www.worldbank.org/en/country/zambia/overview>
28. "FAO in Emergencies: Madagascar." FAO website. Accessed online February 18, 2016 at <http://www.fao.org/emergencies/countries/detail/en/c/161541/>
29. "Madagascar." UNICEF website. Accessed online February 18, 2016 at <http://www.unicef.org/madagascar/5557.html>
30. Rural poverty in Zambia.
31. "Zimbabwe and FAO Partnering for sustainable agriculture and sound policies." Food and Agriculture Organization. Accessed online February 18, 2016 at: <http://www.fao.org/3/a-az490e.pdf>
32. "Rural poverty in Timor Leste." Rural poverty portal. Accessed online February 18, 2016 at: http://www.ruralpovertyportal.org/country/home/tags/timor_leste
33. Ibid.
34. "El Niño: Overview of impact and projected humanitarian needs and response as of 29 January 2016". Accessed online at <http://reliefweb.int/report/world/el-ni-o-overview-impact-and-projected-humanitarian-needs-and-response-29-january-2016>
35. Winsor, Megan. "El Niño In Ethiopia: Amid severe drought and food crisis, WHO deploys emergency response team." *International Business Times*, December 17, 2015.
36. USAID's Resilience Policy and Guidance can be found here: https://www.usaid.gov/sites/default/files/documents/1866/Policy%20%26%20Program%20Guidance%20-%20Building%20Resilience%20to%20Recurrent%20Crisis_Dec%202012.pdf
37. "El Niño: Overview of impact and projected humanitarian needs and response as of 29 January 2016"
38. Ibid.
39. Ibid.
40. Casey, Michael. "Did climate change, El Niño make Texas floods worse?" CBS News. August 19, 2015. Accessed online at: <http://www.cbsnews.com/news/did-climate-change-el-nino-make-texas-floods-worse/>
41. Turnbull, Marilise, Charlotte Sterrett, Amy Hilleboe, and Seki Hirano. *Extending impact: Factors influencing households to adopt hazard resistant construction practices in post-disaster settings*. Catholic Relief Services, 2015.

ACRONYMS

CIAT	International Center for Tropical Agriculture
CRS	Catholic Relief Services
CSA	climate-smart agriculture
DFAP	Development Food Assistance Program
DFID	Department for International Development (UK)
DINER	Diversification for Nutrition and Enhanced Resilience
DMMU	Disaster Mitigation and Management Unit
DRR	disaster risk reduction
ECHO	European Community Humanitarian Office
EMMA	Emergency Market Mapping Analysis
EU	European Union
FAO	Food and Agriculture Organization
HIV/AIDS	human immunodeficiency virus / acquired immune deficiency syndrome
IPC	Integrated Phase Classification
IDB	Inter-American Development Bank
IFAD	International Fund for Agricultural Development
JEOP	Joint Emergency Operations Program
MAECD	Ministère des Affaires étrangères, du Commerce et du Développement
OFDA	Office of U.S. Foreign Disaster Assistance
SMS	short message system
UN	United Nations
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
WASH	water, sanitation and hygiene
WFP	World Food Program
YEAC	Youth Emergency Action Committee

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