



Food and Agriculture Organization
of the United Nations

2015–2016 El Niño

Early action and response for
agriculture, food security and nutrition

Report

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2015–2016 El Niño

Early action and response for agriculture, food security and nutrition

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

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What is El Niño?

El Niño is the warming of sea surface temperatures in the tropical Pacific, which occurs roughly every two to seven years, lasting from six to 24 months. While reduced rainfall and drought is a key outcome of El Niño, the phenomenon can also cause heavy rains and flooding. Impacts of El Niño on agriculture and food security depend on a complex interplay of meteorological factors and range from minor to severe. The current 2015–16 El Niño is notable in terms of its strength and also its negative impact on crop production, livestock and agricultural livelihoods around the globe.

Background and purpose

The impact of the 2015-16 El Niño weather phenomenon has been one of the most intense and widespread in the past one hundred years. The agriculture, food security and nutritional status of 60 million people around the globe is affected by El Niño-related droughts, floods and extreme hot and cold weather. While the El Niño itself has passed its peak and is now declining, its impact is still growing. Harvests in several parts of the world have already failed and are forecast to fail in other areas.

This report provides a global analysis of the current and expected evolution of El Niño-related disasters and their impact on agriculture, food security and nutrition. It aims to give a consolidated outlook of the situation and the early actions being taken by governments, partners and the Food and Agriculture Organization of the United Nations (FAO). Analysis in the report is divided between FAO high priority countries (pp 5-31) and other countries at risk (pp 32-42). Countries were selected based on a combination of analysis of the El Niño event and FAO priorities for strengthening the resilience of livelihoods to threats and crises.

In view of the rapid evolution of the El Niño phenomenon, this report is updated regularly. It is part of a more general effort by FAO to increase the resilience of rural populations threatened by crises, including extreme climatic events such as El Niño. Given the high degree of exposure and vulnerability of populations to such events, the need for a focus on resilience building is clear. A recent ten-year analysis led by FAO's Climate, Energy and Tenure Division showed that 25 percent of all damage caused during natural disasters is in the agriculture sector. For drought, agriculture is the single most affected sector, absorbing around 84 percent of all the economic impact.¹

¹ <http://www.fao.org/3/a-i5128e.pdf>

Country profiles

For each country, the following pieces of evidence have been collated to inform decision-making:

- ◆ **Country rank within the Index for Risk Management – INFORM.**

- INFORM is a global, open source risk-assessment index for humanitarian crises and disasters in support of prevention, preparedness and response. It is a collaboration of the Inter-Agency Standing Committee (IASC) and the European Commission. (www.inform-index.org).

- ◆ **The impact of the El Niño event** within the country. Agricultural and food security impacts of El Niño-related droughts, floods and other climatic events is recorded. (Global, regional and national forecasts and food security analysis centres, FAO GIEWS country updates).

- ◆ **Major disasters that have occurred in previous El Niño years**, specifically 1997–1998, 2002–2003 and 2009–2010, and the **highest population and economic impacts** recorded. These figures are only for a single disaster (unless otherwise indicated). For example, if multiple floods occurred during an El Niño year, only the impacts of the most severe event are indicated. (www.emdat.be/database).

- ◆ **Planned and ongoing response actions** carried out by FAO and partners. This information is based on available data (FAO, government statements, UN/NGO reports) and will evolve as the situation progresses.

Regional highlights

Africa

- Ethiopia – an estimated 10.2 million people need food assistance in 2016. Malnutrition rates across the country remain extremely high, with over one-third of Ethiopia's *woredas* now classified as facing a food security and nutrition crisis.
- Somalia – drought has been declared in Puntland and Somaliland, where some communities have not experienced normal rains for up to four seasons, spanning two years. Nearly 4.7 million people are food insecure. Of this figure, 1.7 million people are in Puntland and Somaliland.
- Southern Africa – an estimated 31.6 million people are food insecure in the region with Lesotho, Malawi, Swaziland and Zimbabwe declaring drought emergencies. The forecast continues to indicate drier than normal conditions.
- Sudan – 4.6 million people are acutely food insecure, primarily due to the effects of El Niño, and is likely to increase due to below-average agricultural production in 2015, rising staple food prices, very poor pasture conditions and continued conflict.

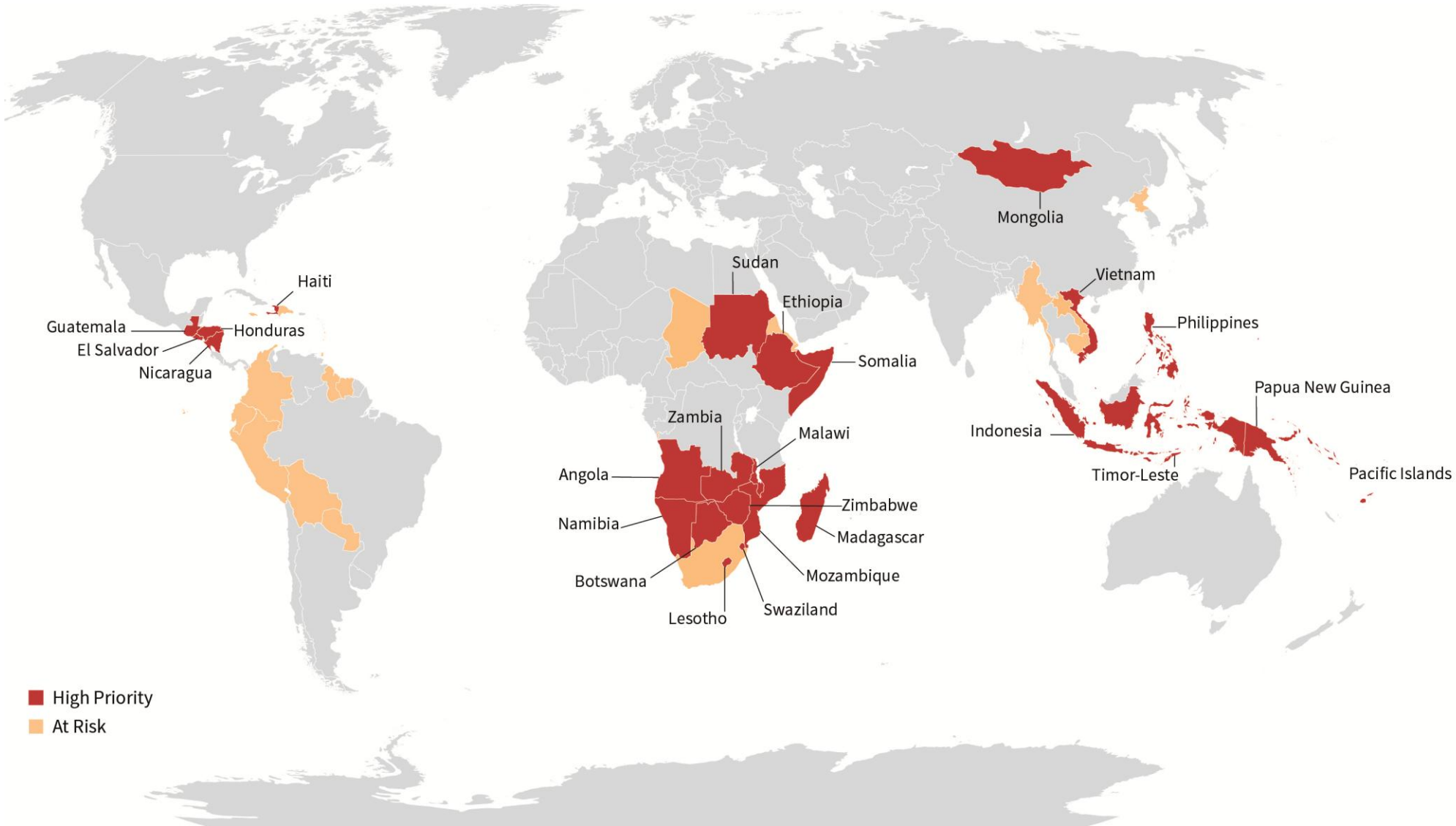
Latin America and the Caribbean

- Haiti – an estimated 3.6 million are food insecure. The 2015 spring harvest has resulted in 89 percent losses in the most drought-affected areas.
- Central America – currently experiencing the worst drought in decades, it is affecting food insecurity for a second consecutive year with over 3.5 million people food insecure and in need of humanitarian assistance after suffering major crop losses due to prolonged drought conditions. The 2016 maize harvest is expected to be far below average and some 8 percent below last year's already compromised harvest.

Asia and the Pacific

- Fiji – a Category 5 Severe Tropical Cyclone "Winston" hit the country's islands on 20 and 21 February affecting 40 percent of the population and damaging 100 percent of crops in the hardest hit areas. Total damage to crops and livestock is estimated at USD 61 million.
- Indonesia – in the most drought-affected areas in eastern Indonesia, paddy planting was up to 40 percent lower than normal. In 2015, fires burnt 2.6 million ha of forest and agricultural land.
- Papua New Guinea – a third of the population – 2.7 million people – are affected by drought, frost and forest fires.
- Viet Nam – 15 provinces have declared drought and saltwater intrusion emergencies at different levels.

2015–2016 El Niño FAO priority countries

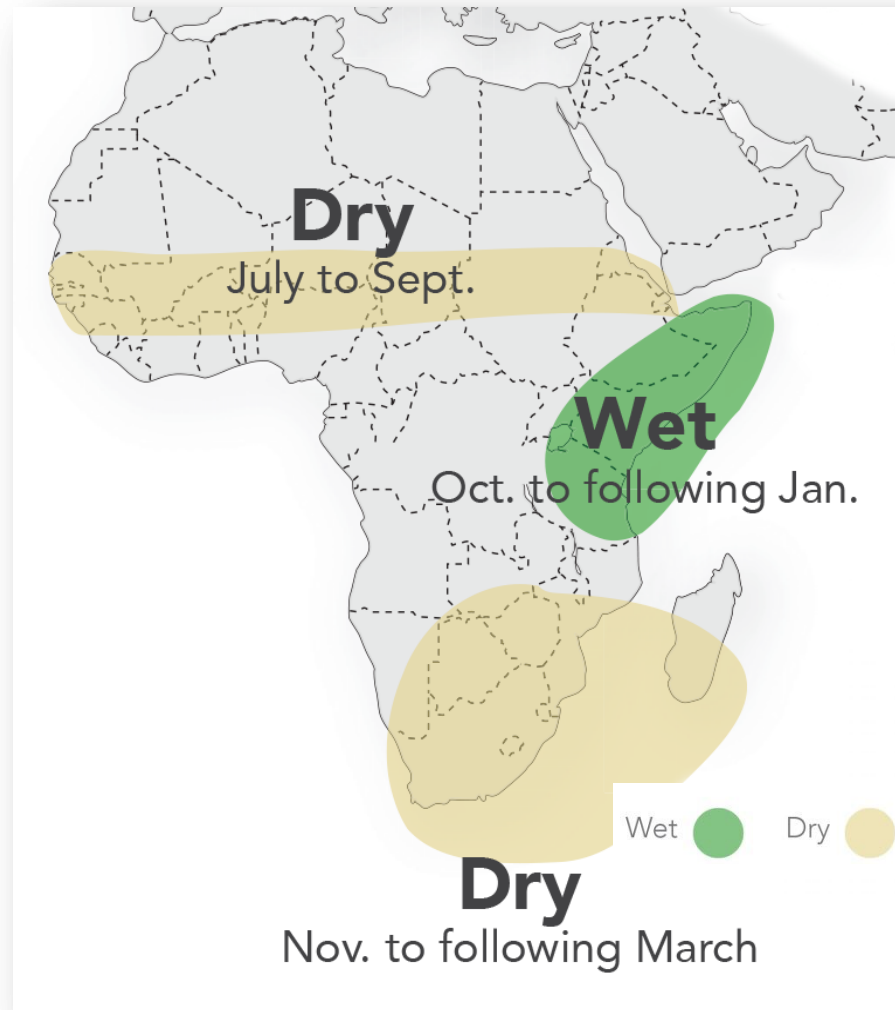


■ High Priority
■ At Risk

NORTH, EAST AND SOUTHERN AFRICA

Historical El Niño regional trends for Africa

The Institute for Climate and Society at Columbia University has developed a typology of El Niño climatic impacts based on analysis of El Niño events over the years. The following map of Africa indicates the typical impacts of El Niño on the continent.



For more information on El Niño and La Niña, go to: <http://iri.columbia.edu/enso/>

Sources:

1. Ropelewski, C. F., and M. S. Halpert, 1987: Global and regional scale precipitation patterns associated with the El Niño Southern Oscillation. *Mon. Wea. Rev.*, 115, 1606-1626;
2. Mason and Goddard, 2001. Probabilistic precipitation anomalies associated with ENSO. *Bull. Am. Meteorol. Soc.* 82, 619-638



Somalia

INFORM Rank: 1



Drought declared in the north (Puntland, Somaliland)



Animal losses, massive outmigration

Situation and outlook

- ◆ Nearly 4.7 million people, 38 percent of Somalis, are food insecure (IPC Phases 2, 3 and 4) and will need humanitarian assistance through June 2016. Of this figure, 1.7 million people are in Puntland and Somaliland.
- ◆ Drought has been declared in Puntland and Somaliland, where some communities have not experienced normal rains for up to four seasons, spanning two years.
- ◆ Forecasts point to yet another season of average to below-average rains in parts of Puntland and Somaliland during the ongoing *Gu* season (when Somalia usually receives 75 percent of its annual rainfall).
- ◆ The below-average rainfall severely affected the 2015 *Gu/Karan* cereal harvest in Somaliland, estimated at 7 700 tonnes – 87 percent below the five-year average (2010-2014). Poor crop production has also reduced farmers’ own seed stocks.
- ◆ The drought has led to a massive outmigration of livestock, rising water prices and a sharp increase in debt among poor households. A combination of severely weakened livestock and recent heavy rains has caused a spike in animal losses (e.g. from hypothermia and diarrhea) particularly in the northwest.
- ◆ Water levels in the Shabelle River are reported to have drastically decreased – reaching their lowest levels in over 50 years. This has led to a critical deterioration of access to water for both humans and livestock along the entire river.

Disaster associated with El Niño in 1997–1998, 2002–2003 or 2009–2010	Highest impacts recorded for a single disaster event	
	Total people affected	Total damage (USD)
Flood	1 million (1997)	(No data)

Somalia El Niño response

Government and other partners

- El Niño contingency plan for preparedness and immediate response finalized. “Call for Aid: El Niño and Drought in Somalia” issued in late March 2016.

FAO

Early warning and action averted disaster in many areas, especially those at high risk of flooding in late 2015. Government and local communities were on the front line of these efforts, backed by a wide range of partners. With flexible and early funding, notably from the UK, US and CERF, FAO was able to repair river breakages and reinforce embankments, reduce the likelihood of animal disease outbreaks, help farmers protect seed/grains, and increase water storage in the north. Results include:

- Prepositioning of veterinary drugs in the north (i.e. Puntland and Somaliland)
- 210 collapsible tanks distributed to improve water storage in the north.
- Water catchments repaired in Somaliland, increasing water storage capacity enough to water 60 000 animals for three months.
- Local livestock surveillance through awareness campaigns.
- Community-based early warning systems established (radio broadcasts, leaflets, posters and around 10 000 SMS alerts).
- Timely repair of over 100 riverbank breakages.
- Around 9 000 ha of farmland saved from flooding, capable of producing enough to feed 1.7 million people for 1 month – worth USD 6.7 million.
- 11 000 families equipped to build storage platforms to protect household seed and grain stocks.
- 400 IDP and host families received fishing kits, training and support.
- 9 000 ha of farmland saved from flooding, capable of producing enough to feed 1.7 million people for one month – worth USD 6.7 million.

Funding requirements

USD 17 million required to meet the immediate needs of more than 1 million people in Somaliland and Puntland to rapidly secure cash through cash-for-work to meet food security needs, save their livestock and plant by April 2016 for the main planting season. This is part of FAO’s Rapid Results Drought Response Plan which links to the “Call for Aid: Drought and El Niño in Somalia”.



Sudan

INFORM Rank: 6



Drought



Animal Losses

Situation and outlook

- ◆ 4.6 million people are acutely food insecure primarily due to the effects of El Niño.
- ◆ Between March and September 2016, more than 4 million people will be in Crisis (IPC Phase 3) or worse. The number of rural, resident households expected to be in Crisis is about twice as high as in a typical year.
- ◆ Below-average agricultural production in 2015 (national cereal production was 25 percent below the 5-year average), rising staple food prices, very poor pasture conditions and continued conflict in the Darfurs, South Kordofan, and Blue Nile States are leading to much higher food insecurity in 2016.
- ◆ Rainfall was predominantly late and intermittent with long dry spells throughout the country, which affected significantly the cultivation and planting of crops as well as pasture and water for the livestock.
- ◆ Based on the joint analysis made by FAO and the Ministry of Livestock, about 8.4 million livestock require immediate support with inputs and services. This includes fodder and supplementary feeding, water, and veterinary services to mitigate the impact of El Niño.
- ◆ The 2016 lean season is anticipated to commence earlier than normal. Livestock and water needs are currently quite critical, and the lean season needs could even be higher.

Disaster associated with El Niño in 1997–1998, 2002–2003 or 2009–2010	Highest impacts recorded for a single disaster event	
	Total people affected	Total damage (USD)
Drought	4.3 million (2009)	

Sudan El Niño response

Government and other partners

- Closely monitoring the situation; preparing to conduct a post-harvest assessment.
- Humanitarian Country Team has prepared a three-month multi-sectoral mitigation and response plan.

FAO

- Supported various assessments and the preparation of response plans. A crop and food security assessment mission has been conducted in December 2015, with results currently being endorsed by the Government.
- FAO has mobilized resources from DFID with UNICEF and WFP to address the impacts of El Niño in Kassala state in order to procure animal feed and water transportation services to support livestock health during an extremely difficult dry season for pastoralist families in eastern Sudan.
- FAO has also received funding to support a recent influx of IDPs in North Darfur who have arrived at IDP camps with livestock in areas already hard-hit by El Niño and without sufficient pasture and water resources.
- In December 2015, FAO provided technical leadership and coordination support to develop the joint UN-Government of Sudan El Niño Mitigation and Preparedness Plan. The plan originally identified approximately 1.6 million resident farmers and pastoralists affected by El Niño. However, in light of field reports on the seriousness of the current dry season, FAO is now conducting an assessment of El Niño impacts across Sudan in order to update the number and location of those worst affected in order to ensure targeted responses are funded and implemented quickly.

Funding requirements

USD 23 million is required for FAO's El-Niño activities, in line with the UN-Government of Sudan's El Niño Mitigation and Preparedness Plan. Priorities for action include animal feed distribution, vaccination and treatment campaigns, water trucking and rehabilitation of water points for livestock in affected areas; emergency seed distribution to affected areas for the main agricultural season; and provide livelihood training and start-up kits.



Ethiopia

INFORM Rank: 13



Drought in northeast



Flooding in northeast, southeast and southwest



Animal Losses

Situation and outlook

- ◆ Severe drought conditions emerged due to the combination of failed *belg* (spring) rains and erratic and delayed *meher* (summer) rains in 2015 due to the effects of El Niño. Farmers and herders experienced severe levels of crop loss and livestock mortality and morbidity.
- ◆ Some 10.2 million people require humanitarian food assistance throughout 2016.
- ◆ The recent revision of hotspot *woreda* (district) classification data indicates that nearly 20 percent of *woredas* identified as Priority 2 or 3 in December 2015 had slipped into Priority 1 or 2 by March 2016.
- ◆ Flooding has occurred in late March and early April 2016 in four regional states – Afar, Amhara, Oromia and Somali. More flooding is expected in the coming weeks.
- ◆ According to regional Bureaus of Agriculture, over 1.7 million households are seed insecure and do not have inputs to plant in the main agricultural season (*meher*).
- ◆ The ongoing *belg* rains were delayed and erratic, impacting planting especially in the north.
- ◆ Some 654 000 livestock-dependent households do not have sufficient feed for their animals and require urgent support due to lack of pasture and water access.
- ◆ The arrival of the *belg* rains in pastoral areas is posing health threats to animals weakened by the drought, causing many to die.

Disaster associated with El Niño in 1997–1998, 2002–2003 or 2009–2010	Highest impacts recorded for a single disaster event	
	Total people affected	Total damage (USD)
Drought	12.6 million (2003)	15.6 million (1998)
Flood	110 000 (2003)	(No data)

Ethiopia El Niño response

Government and other partners

- The Government of Ethiopia is allocating USD 22 million for emergency seed support for the *meher* season to all affected regions and has committed over USD 50 million to livestock interventions.
- By mid-April, NGOs have targeted about 35 percent of seed-insecure households with inputs for the *meher* season and have dedicated USD 4.5 million to livestock response, including vaccination and treatment, fodder and supplementary feed, destocking and water access support.

FAO

- Providing 90 000 households in underserved *woredas* with crop seed in the most nutritionally vulnerable districts.
- Distribution of survival and supplementary livestock feed to 9 600 households is ongoing.
- Improving access to water for livestock through the rehabilitation of 18 water points, benefiting 125 480 livestock owned by 12 783 households.
- Destocked 4 381 sheep and goats in Siti Zone, enhancing the income of 2 214 livestock sellers and improving the nutritional intake of 4 354 displaced households.
- Treated and/or vaccinated nearly 1.4 million animals belonging to 77 118 households.
- As co-chair of the Disaster Risk Management Agriculture Task Force, FAO is working closely with the Government of Ethiopia by coordinating response and launching funding campaigns, e.g. for seed support for the *meher* season.

Funding requirements

USD 50 million required to fully implement FAO’s El Niño Response Plan to assist 1.8 million pastoralists, agropastoralists and smallholder farmers. Current priorities include distribution of crops seeds for the upcoming *Meher* season; emergency livestock feed and animal health campaigns to protect core breeding animals; and cash-for-work initiatives.



Mozambique

INFORM Rank: 20



Drought



Floods in the North

Situation and outlook

- ◆ Close to 1.2 million people are food insecure, of which 600 000 people require immediate food assistance. The Government estimates that food insecurity could reach 1.8 million people in 2016.
- ◆ Drought is affecting mostly southern and central regions of Mozambique. Worst affected provinces are Maputo, Gaza, Inhambane, Tete and Sofala.
- ◆ Food prices are estimated to be 40 percent higher than the five-year average. Retail prices of maize rose sharply over the past months and in March they were more than double the previous year.
- ◆ Rains have been delayed (up to 40 days) and insufficient across most regions, resulting in below-average vegetation conditions and lowered 2016 production prospects. Over 35 percent of cultivated areas in the south are now completely dry and will not produce any harvest until the next rainy season in March 2017.
- ◆ The Government estimates that 468 000 farmers and an average of 878 740 ha of agricultural land are affected by drought. Some 533 700 heads of livestock are at risk due to drought conditions, with an estimated 5 708 deaths.
- ◆ Strong rains in the north have affected around 10 000 people. Forecasts predict a continuation of below-average rains and increased likelihood of higher temperatures until the harvest period (April-May 2016).

Disaster associated with El Niño in 1997–1998, 2002–2003 or 2009–2010	Highest impacts recorded for a single disaster event	
	Total people affected	Total damage (USD)
Drought	600 000 (2002)	(No data)
Cyclone	23 000 (2003)	3 million (2009)
Flood	400 000 (1997)	(no data)

Mozambique El Niño response

Government and other partners

- On 12 April, the Government declared a “red alert” for a period of three months — the highest state level of disaster, due to severe drought in central and southern Mozambique.
- The Government intends to boost assistance to populations affected by the drought, a strategy that provides about MZN 580 million (more than USD 10 million) to strengthen food assistance under the contingency plan.
- The contingency plan includes a varied set of measures to prevent, mitigate and respond to the current crisis, such as:
 - disseminating forecast and adaptation messages;
 - distributing improved seeds and conducting animal disease surveillance;
 - improved water access for people as well as cattle; and
 - allocation of resources for positioning and response.
- In March, CERF has disbursed USD 4.6 million to the health, nutrition, WASH and food security/agriculture sectors.

FAO

- Supporting coordination efforts with the Humanitarian Country Team.
- Assist the Government in preparing the response plan.
- Developing a programme targeting 100 000 producers in the Maputo, Gaza and Tete provinces with province with crop and livestock support.

Funding requirements

USD 12 million required to assist 100 000 households for interventions focused on droughts and floods. Priorities include safeguarding agriculture-based livelihoods; protecting and enhancing livestock production; increasing water access through improved infrastructure and information; coordination and analysis.



Drought



Flood

Situation and outlook

- ◆ It is estimated that close to 1.4 million people are food insecure in seven districts of southern Madagascar (80 percent of the districts population) following a fourth consecutive year of crop failure and aggravated by the impact of El Niño, drought and a locust plague.
- ◆ Since October 2015, the south and southwestern regions of the country have had very poor rainfalls, which has disrupted crop development and damaged pasture for livestock. Water for both human, animal and agricultural consumption has been scarce.
- ◆ The results of a rapid assessment for crop production carried out by FAO in February 2016, suggests that less than 20 percent of the planted crops will be harvested. The delayed harvest season starting in May will make the lean season even more difficult and longer for the population of the South.
- ◆ Towards the end of the rainy season (March-April 2016), rainfall will improve but remaining slightly below normal in the south, southwest and far north.

Disaster associated with El Niño in 1997–1998, 2002–2003 or 2009–2010	Highest impacts recorded for a single disaster event	
	Total people affected	Total damage (USD)
Drought	600 000 (2002)	(no data)
Flood	20 000 (1998)	150 million (2003)

Madagascar El Niño response

Government and other partners

- On 22 March, the Government declared a state of emergency for southern Madagascar due to drought.
- Madagascar has reviewed and updated the Food Security and Nutrition contingency plan, including a review of cluster members' capacity for response (logistics, prepositioning of food stocks, seeds and other inputs).

FAO

- Conducted a rapid assessment in seven of the most affected districts in the south of the country.

Funding requirements

USD 12 million is required to assist 102 000 households to safeguard agriculture-based livelihoods, protect and enhance livestock production, increase water access through improved infrastructure and information, coordination and analysis. CERF funding is expected to assist 16 000 farming households identified as needing agricultural emergency assistance.



Malawi

INFORM Rank: 65



Drought in the south



Floods in the north

Situation and outlook

- ◆ Damages in crops caused by dry-spells are worryingly high, particularly in the southern and some areas of the central region of the country. An estimated decrease of maize production by 12 percent and legumes by 13.4 percent compound the food security of Malawians for the next year.
- ◆ According to the information collected by the Ministry of Agriculture and FAO during March 2016, around 51 percent of the planting areas have been affected by the late onset of the rains and dry conditions.
- ◆ Overall, 2015 cereal production is estimated at below-average levels of 3.1 million tonnes, about 21 percent lower than the record 2010-2014 average. The scarcity of water in some areas will compromise the off-season farming activities in the southern districts.
- ◆ 2.8 million people have received food assistance in 25 districts during the lean season, up from 640 000 people in the previous year. Over 47 percent of children under the age of five are currently malnourished. The number of children diagnosed with severe acute malnutrition has doubled during the last three months, according to UNICEF.
- ◆ As of March 2016, the price of maize in local markets has soared up to MWK 240 per kilogram, almost 140 percent above its three-year average for the time of year.

Disaster associated with El Niño in 1997–1998, 2002–2003 or 2009–2010	Highest impacts recorded for a single disaster event	
	Total people affected	Total damage (USD)
Drought	2.8 million (2002)	(No data)

Malawi El Niño response

Government and other partners

- On 12 April, the President of Malawi declared a State of National Disaster, citing a projected maize deficit of over 1 million tonnes.
- The Government is intensifying existing social support services (safety nets), e.g. social cash transfers; income-generating public works programme; inputs for assets programme; school feeding; and farm input subsidy programme.
- The Humanitarian Country Team has supported the preparation of a Food Insecurity National Response Plan in November 2015, which appealed for USD 146 million to cover urgent needs in the coming months.
- CERF has approved USD 16 million in response to the early 2015 floods and current food insecurity needs caused by the recent dry spells.
- The One Fund Humanitarian Window in Malawi has mobilized support with DFID of USD 5.4 million in January 2016 to strengthen the contingency measures to tackle the negative effects of El Niño.

FAO

- Co-leads the Agriculture Cluster, which supported the Ministry of Agriculture and other stakeholders in designing the Agriculture Response Plan for El Niño. The total value of the agriculture component in the national response plan is USD 44 million. Currently, near 34 percent of the plan has been supported.
- FAO is providing technical assistance to the Ministry of Agriculture and cluster members to gather information about the current situation in the country and analyse the areas in which the food production will be affected drastically.
- Funding from DFID has been received to support affected farmers with small livestock and vaccination in six districts widely affected by dry spells. Additional funding has been confirmed by DFID to support irrigation and livestock activities during the coming months.
- Almost USD 2 million has been mobilized from CERF for distributing agricultural inputs to 53 000 households (including female-headed households), as well as small-scale irrigation equipment in the six most affected districts.

Funding requirements

USD 10.5 million required to assist 260 000 households. Priorities include safeguarding agriculture-based livelihoods, protecting and enhancing livestock production, increasing water access through improved infrastructure, and information, coordination and analysis.



Angola

INFORM Rank: 68



Drought

Situation and outlook

- ◆ Currently 1.4 million people are affected by drought in the southern provinces, particularly in Cunene, Huila, Cuando Cubango and Namibe.
- ◆ The National Civil Protection Department in Cunene estimates that over 700 000 people are at risk of food insecurity (some 72 per cent of the province's population), up from 500 000 last year.
- ◆ Agriculture production during this season will be less than last year due to late rains and stressed crops.
- ◆ It is estimated that 360 000 cattle have been lost (equivalent to USD 345 million) due to lack of water and feed.
- ◆ Outbreaks of foot and mouth disease, reported on the border with Namibia, have affected livestock prices due to quarantine.
- ◆ Water constraints, particularly in Cunene, is a danger for people and animals;
- ◆ Prices of maize, sorghum and millet increased rapidly which has affected food security.
- ◆ The coastal areas of Benguela and Kuanza Sul is also affected by drought and could aggravate food insecurity and malnutrition.

Disaster associated with El Niño in 1997–1998, 2002–2003 or 2009–2010	Highest impacts recorded for a single disaster event	
	Total people affected	Total damage (USD)
Flood	331 700 (2009)	(no data)
Drought	105 000 (1997)	(no data)

Angola El Niño response

Government and other partners

- The Government has put in action the contingency plan for southern Angola and civil protection, agriculture and health authorities are working together.
- The UN started a USD 5 million emergency project for food insecurity, malnutrition, health services and resilience to assist the most vulnerable population.
- NGOs and several partners are working on malnutrition and supplying therapeutic medicines to combat stunting in children.
- Ministry of Health has started revitalization of health services, particularly to combat yellow fever, malaria and chikungunya.
- The European Union is contributing to the emergency programme and preparing a pot-emergency programme to reinforce resilience in order to improve the next agricultural season and support livestock losses.

FAO

- FAO is assisting 300 000 people in need with CERF resources and has an emergency TCP project to support resilience in Cunene, Namibe and south of Huila for 1 000 households (almost 6 000 people).

Funding requirements

USD 40 million required to assist 290 000 households. Priorities include protecting and enhancing livestock production, safeguarding agriculture-based livelihoods; rehabilitating water points through cash-for-work activities; information, coordination and food security analysis.



Zambia

INFORM Rank: 70



Drought

Situation and outlook

- ◆ Currently, 800 000 people cannot meet their basic food needs, with 47 percent of children stunted (compared to 6.3 percent prior to the crisis).
- ◆ Some of the main cropping areas including Southern and Lusaka Provinces and the southern districts of Western Province have faced prolonged dry spells, negatively impacting agricultural production.
- ◆ Planting rains were late in many areas, with some areas being delayed by approximately one month.
- ◆ Dry conditions have stressed crops, resulting in wilting (estimated at 60-70 percent) and stunted growth, especially impacting maize.
- ◆ Additionally, with the expected prevailing El Niño conditions for the second half of the season, seasonal production is expected to fall below recent five-year average levels.
- ◆ Maize prices remain high and are expected to be above the five-year average from February through September due to atypically high market demand, an extension of the lean period, depreciation of the local currency, poor seasonal progress, as well as below-average production prospects for the 2015/16 season.

Disaster associated with El Niño in 1997–1998, 2002–2003 or 2009–2010	Highest impacts recorded for a single disaster event	
	Total people affected	Total damage (USD)
Drought	(no data)	(no data)

Zambia El Niño response

Government and other partners

- The Government input support programmes are targeting 1 million farmers to improve input access. At the same time the Disaster Management and Mitigation Unit (DMMU) is updating the Development of the Zambia Rural Livelihoods Baselines, which have become unreliable as the changes in weather patterns (including floods and droughts) have resulted in changed livelihoods. The DMMU has prepared a Draft 2015/2016 National Contingency Plan.

FAO

- Together with WFP and government extension staff, FAO undertook a rapid assessment to evaluate the impact of El Niño and identify some immediate response actions, operational requirements and capacity to implement an emergency agriculture response (such as seeds and animal health services) within the ongoing agricultural season.

Funding requirements

USD 7 million required to assist 424 000 households. Priorities include protecting and enhancing livestock production, safeguarding agriculture-based livelihoods; rehabilitating water points through cash-for-work activities; information, coordination and analysis.



Zimbabwe

INFORM Rank: 71



Drought



Animal Losses

Situation and outlook

- ◆ The Government reported that 4 million people need food aid, up from 3 million initially.
- ◆ The national water reservoirs have reportedly dropped below 50 percent. Drier than average conditions are expected to continue, increasing the possibility of reduced maize production in 2016, compounding the effects of an estimated 50 percent reduction in 2015 of cereal production compared to 2014. This estimate is also 49 percent lower than the previous five-year average.
- ◆ By early February, most of the country received 25 percent less than the average rainfall. In many southern parts of the country, the rainfall was insufficient to allow planting, while it was more favourable in the north. In many areas where planting did occur, the crop suffered moisture stress due to the dry conditions and high temperatures.
- ◆ Over 16 600 cattle have died due to the effects of drought, and pasture conditions are ranging from poor to very poor.

Disaster associated with El Niño in 1997–1998, 2002–2003 or 2009–2010	Highest impacts recorded for a single disaster event	
	Total people affected	Total damage (USD)
Drought	1.6 million (2010)	(No data)

Zimbabwe El Niño response

Government and other partners

- The President of Zimbabwe declared a State of National Disaster on 5 February and appealed for USD 1.5 billion for emergency needs.
- The Government is in the process of importing 500 000 to 700 000 tonnes of maize.
- A Food Insecurity Response Plan was developed by the Zimbabwe Humanitarian Country Team (HCT) in late September 2015, which aims to cover the emergency needs. The response plan seeks USD 132.2 million, of which CERF has allocated USD 8.1 million.
- The UN Country Team and the HCT have endorsed the development of an El Niño-specific Inter Agency Contingency Plan. This will address all sectors and be aligned with the El Niño contingency plan being developed by the Government.

FAO

- A drought mitigation programme has been prepared to address the combined impact of the drought with the anticipated effects of El Niño.
- Supported 8 000 households to access livestock survival feed and drought-tolerant seeds of sorghum and cowpeas in Mangwe, Matobo, Beitbridge, Gwanda and Chivi.

Funding requirements

USD 40 million required to fully implement FAO Zimbabwe’s drought mitigation programme, of which USD 2.1 million has been received from CERF. Priorities include providing subsidized drought-tolerant seeds (small grains and legumes); subsidized survival stock feed; rehabilitating 280 water points; animal health interventions (foot-and-mouth disease and anthrax vaccination); and strengthened early warning systems.



Namibia

INFORM Rank: 75



Drought

Situation and outlook

- ◆ Over 1.5 million people (60 percent of the population) live in rural areas, relying on subsistence farming and pastoralism, and have been severely affected by drought.
- ◆ According to the vulnerability assessment for 2015/2016, 578 480 people (almost a quarter of the total population) are currently food insecure.
- ◆ Food security conditions have weakened, with most households having already depleted their stocks from last year’s harvest and have become dependent on market supplies and the Government’s Drought Relief Food Programme, which ended in March 2016.
- ◆ Conditions of the 2016 cereal crop, to be harvested from May, are generally unfavourable. Delayed planting and insufficient rains during the 2015/16 cropping season have compounded the impact of the dry conditions of the previous season.
- ◆ Overall, cereal production in 2016 is provisionally forecast at 75 000 tonnes, based on a Government-led assessment in February, putting this year’s crop at 33 percent below the five-year average.
- ◆ The poor seasonal rains have also negatively impacted on pasture growth and water availability, resulting in a deterioration of livestock body conditions. Many farmers in northcentral, northwest, central and the southern parts have reported increased livestock mortality rates on account of the dryness.
- ◆ Veld fires have also contributed to a reduction in the availability of grazing.

Disaster associated with El Niño in 1997–1998, 2002–2003 or 2009–2010	Highest impacts recorded for a single disaster event	
	Total people affected	Total damage (USD)
Drought	345 000 (2002)	1 million (1998)

Namibia El Niño response

Government and other partners

- The Government continued to provide subsidized seeds and fertilizers in the 2015/16 season, sufficient to cover an area of 3 ha per farmer. In addition, subsidies were also provided for ploughing and weeding operations.
- Drought relief has been provided by the Government for the most vulnerable in all the 14 regions of the country. This includes an additional NAD 530 million (USD 37 million) for drought relief for the period November 2015 to March 2016.

FAO

- The Ministry of Agriculture, with support from partners including FAO, has been involved in the rehabilitation of boreholes, training farmers on conservation agriculture and rangeland management.

Funding requirements

USD 2.3 million required to assist 50 000 households. Priorities include vegetable seed and fertilizer distribution; drought-tolerant seed production; small-scale irrigation initiatives; supplementary feed for livestock; fodder production; restocking; animal health interventions; and rehabilitating water points through cash-for-work initiatives.



Drought

Situation and outlook

- ◆ One in every four people in Lesotho are at risk of food insecurity up to June 2016. This figure is likely to increase beyond 725 000 people after June 2016 (once the latest crop forecast is available).
- ◆ A very intense drought took place during the entire planting season due to below- normal rainfall and above-average temperatures across most of Lesotho. These dry conditions prevented many farmers from planting during the last cropping season (August-December 2015). Furthermore, cold spells in November 2015 and March 2016 caused extensive damage to emerging crops in the mountainous areas.
- ◆ Food prices in the region are rising sharply due to poor production in South Africa and weak Rand-Loti exchange rate against USD.
- ◆ Production prospects of the 2016 cereal crops are poor, reflecting the unfavourable weather conditions of the last nine months.
- ◆ The food security situation is likely to worsen on account of an expected production decline, poor livestock conditions and higher maize prices. The impacts of recent events are further compounded by vulnerability factors such as a 23 percent HIV prevalence and chronic malnutrition at 33 percent.

Disaster associated with El Niño in 1997–1998, 2002–2003 or 2009–2010	Highest impacts recorded for a single disaster event	
	Total people affected	Total damage (USD)
Drought	500 000 (2002)	(No data)

Lesotho El Niño response

Government and other partners

- On 22 December, the Government declared a State of Drought Emergency.
- The Government activated the Drought Preparedness and Mitigation Plan, estimating initial funding needs for the first 6 months at USD 18.1 million.
- The Disaster Management Authority has released a National Drought Emergency Response Plan estimating a total of USD 12 million required for the agriculture and food security sector to respond effectively to the drought effects. This amount will be reviewed upon completion of the Lesotho Vulnerability Assessment (June 2016) and the 2015-2016 crop forecast. The recovery needs in the period 2016-2017 will certainly exceed these initial estimates.

FAO

- FAO has been prioritizing strengthening national capacity for response while providing overall coordination and needs assessment support.
- At household level, FAO intends to support communities affected by drought in the adoption of climate-smart agriculture technologies such as conservation agriculture, home gardening and nutrition, and sustainable land management through the provision of inputs and training.
- FAO will also complement the Government social protection cash grants with home gardening and nutrition packages targeting the poorest households affected by the drought and increase in food prices.

Funding requirements

USD 7 million required to assist 158 000 drought-affected households, of which USD 1.1 million has been committed by ECHO and USD 1.1 million by CERF. Priorities include providing social protection and agriculture support through distribution of emergency inputs for home gardening and nutrition enhancement; protection and restoration of livelihoods through recovery seed production packages and technical support on climate-smart agriculture; climate-smart food production in schools; emergency livestock vaccination and de-stocking; and information coordination and policy analysis.



Drought

Situation and outlook

- ◆ Out of the last five production years, Botswana experienced drought three times.
- ◆ Good rains received in central and western Botswana have helped to slightly reduce, but not eliminate rainfall deficits in the area. However, the majority of the country continues to be severely affected. Due to the dry conditions, crops in many planted areas are in poor condition, while in others, the crops have succumbed to permanent wilting.
- ◆ An estimated total of 49 408 people (7 058 households) require further assistance to existing safety nets (e.g. school feeding, cash and food transfers, Government grants). Of these 41 404 (5 915 households) require survival and livelihoods assistance and 8 004 (1 143 households) require livelihood assistance to protect existing assets.
- ◆ Water levels have declined in many catchments due to erratic rains.
- ◆ Staple food prices are rising with the increase in demand for purchases owing to poor production.

Botswana El Niño response

Government and other partners

- In response to the drought impacts on livestock, the Ministry of Agriculture has increased subsidies on certain livestock feeds by 50 percent.

Disaster associated with El Niño in 1997–1998, 2002–2003 or 2009–2010	Highest impacts recorded for a single disaster event	
	Total people affected	Total damage (USD)
Flood	3 789 (2009)	(no data)



Situation and outlook

- ◆ The country is currently facing food insecurity affecting 300 000 people, but this figure could rise during the lean season of 2015–2016 to 400 000 people (over 30 percent of the population).
- ◆ Food insecurity had already increased by 60 percent between July and December 2015.
- ◆ Although official estimates for the 2016 harvest are not yet available, production is expected to be around 50 percent down on the 2015 output, reflecting both an anticipated reduction in yields and a contraction in the harvested area.
- ◆ Preliminary estimates indicate that the total area planted during this agricultural season (culminating with the main harvest in April) has decreased by 47 percent when compared to the 2014/15 agricultural year. Total maize production is expected to be about 33 500 tonnes, representing a 64 percent reduction from the 2014/2015 production.
- ◆ At the end of January 2016, maize prices increased by 66 percent from the five-year average; in a country in which just under half of the population is unemployed.
- ◆ Due to the low rains received, combined with the high temperatures, many planted crops are experiencing some moisture stress.
- ◆ Reports indicate approximately 64 000 cattle have died due to the effects of drought.

Swaziland El Niño response

Government and other partners

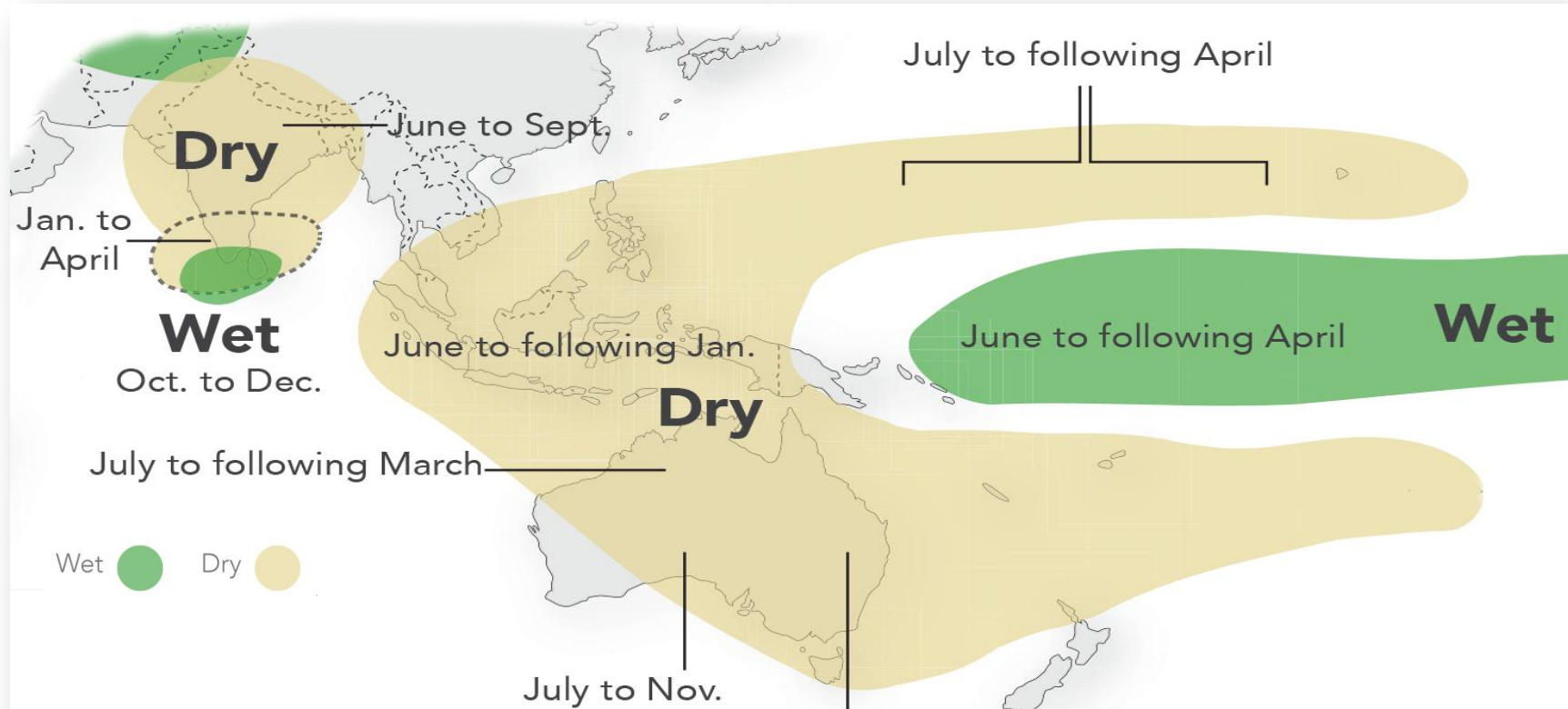
- The Government declared a National State of Emergency on 18 February and launched the National Emergency Response, Mitigation and Adaptation Plan.
- Water restrictions have been put in place by the Government, reflecting lower-than-normal rainfall and reservoir levels.
- The Vulnerability Assessment Committee's 2016 evaluation is expected to take place in May/June, and will provide updated figures on the number of food insecure in 2016/17.

Funding requirements

USD 13.7 million required to assist 300 000 households. Priorities include safeguarding agriculture-based livelihoods; livestock restocking; animal health interventions; increasing water access through cash-for-work activities to rehabilitate water points; and information, coordination and analysis.

Disaster associated with El Niño in 1997–1998, 2002–2003 or 2009–2010	Highest impacts recorded for a single disaster event	
	Total people affected	Total damage (USD)
Drought	(No data)	(No data)

The Institute for Climate and Society at Columbia University has developed a typology of El Niño climatic impacts based on analysis of El Niño events over the years. The following map of Asia and the Pacific indicates the typical impacts of El Niño on the continent.



For more information on El Niño and La Niña, go to: <http://iri.columbia.edu/enso/>

Sources:

1. Ropelewski, C. F., and M. S. Halpert, 1987: Global and regional scale precipitation patterns associated with the El Niño Southern Oscillation. *Mon. Wea. Rev.*, 115, 1606-1626;
2. Mason and Goddard, 2001. Probabilistic precipitation anomalies associated with ENSO. *Bull. Am. Meteorol. Soc.* 82, 619-638



Papua New Guinea

INFORM Rank: 31



Drought



Flood



Cold wave

Situation and outlook

- ◆ 2.7 million people are affected by drought, frost and forest fires in Papua New Guinea. The Prime Minister's office says 1.3 million are classed as being in Category 4 (out of 5) due to drought.
- ◆ After months of suffering from an El Niño-driven drought, large parts of the country have experienced torrential rain since early February, exacerbating the existing levels of vulnerability. The resulting flooding and landslides have affected homes, food gardens, water sources and infrastructure in several provinces. In particular, many Highland and Momase region provinces have sustained extensive damage.
- ◆ Reduced access to clean drinking water and reduced water availability for agricultural activities has affected vulnerable communities. In the Highland provinces, food gardens have been severely affected by frost and drought and two provinces have already declared a State of Emergency.
- ◆ Reduced food availability resulted in drastic increases in basic food prices, raising concerns about food access by the most vulnerable section of the population.
- ◆ Disease outbreaks and insect infestation in parts of the country will further negatively affect the 2016 food crops, currently at the critical growing stage

Disaster associated with El Niño in 1997–1998, 2002–2003 or 2009–2010	Highest impacts recorded for a single disaster event	
	Total people affected	Total damage (USD)
Drought	1 million people suffered from food insecurity (1997–1998)	USD 21 million for food aid (1997–1998)

Papua New Guinea El Niño response

Government and other partners

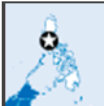
- The Government allocated USD 8.5 million to the drought response for four inter-agency rapid assessments and initial emergency relief to the most affected provinces in the Highlands.
- Department of Agriculture and Livestock (DAL), National Agriculture Research Institute, and National Agriculture Quarantine and Inspection Authority are closely monitoring the situation. Plan and funding proposals have been put forward to donors.
- 3 100 tonnes of food relief has been distributed in the Western Province.

FAO

- Providing sectoral coordination support for drought relief and mitigation to the newly established task force on the 2015-2016 El Niño, led by DAL.
- Deployed an assessment mission to develop a preparedness and response strategy for the food security sector, jointly with WFP.
- Developed an El Niño Early Action and Response Plan for which USD 600 000 has been committed from internal sources.
- Increased FAO staff in country for food security coordination.

Funding requirements

USD 4.9 million required to assist 560 000 subsistence farmers, of which USD 600 000 has been mobilized. Priorities include working with partners to support farming families in the worst affected provinces with drought-tolerant crops and smart irrigation material (e.g. drip-irrigation systems).



Philippines

INFORM Rank: 34



Drought



Cyclone

Situation and outlook

- ◆ According to the Philippines national weather agency, DOST-PAGASA, 29 percent of the country experienced drought in March, while 40 percent and 31 percent of the country (mostly in Mindanao) will likely experience drought this April and May, respectively.
- ◆ The Department of Agriculture estimates that 181 687 farmers have been affected by drought and 96 percent were directly affected by El Niño-associated drought/dry spells. Of this, 54 percent are rice farmers, 38 percent are corn farmers, and 8 percent are high value crop (HVC) farmers.
- ◆ In terms of land area, a total of 224 834 ha were affected and 96 percent has been directly affected by El Niño-associated drought/dry spell. The majority affected are rice areas (61 percent), followed by corn (34 percent).
- ◆ Pest infestation is affecting 1 704 farmers in Region III, with armyworm damaging 1 060 ha of HVCs; and rat infestation is affecting Region XII (South Cotabato, Sarangani, North Cotabato, and Sultan Kudarat) and Region XV (Maguindanao).

Disaster associated with El Niño in 1997–1998, 2002–2003 or 2009–2010	Highest impacts recorded for a single disaster event	
	Total people affected	Total damage (USD)
Drought	2.6 million (1998)	(No data)
Cyclone	3.9 million (1998)	71 million (1998); 585 million (2009)

Philippines El Niño response

Government and other partners

- The Government has prepared the roadmap to address the impact of El Niño, which was approved by the President on December 2015. It aims to address lower food production, higher prices and lower farm income.
- Department of Agriculture (DA) has implemented activities to help farmers cope, such as cloud seeding, seed distribution, promoting crop diversification/rotation and water saving, and enhanced monitoring and validation of impacts.

FAO

- Assisted the DA in preparing a national disaster risk reduction strategy for agriculture and has proactively supported regional field offices in mitigation and rehabilitation planning.
- Developed with DOST-PAGASA, DA and a partner state university, visualization and analysis tools for the national meteorological agency's nine-day weather forecast for farm operations.
- Supported the Government in a rapid damage and needs assessment and provided typhoon (Koppu and Melor) and drought-affected farmers with emergency interventions. Typhoon and drought-affected farmers in the northern Philippines provinces of Nueva Ecija, Pampanga, Tarlac and Aurora were provided with certified rice seeds, fertilizers and vegetable seeds. Drought-affected farmers in North Cotabato province and the Autonomous Region of Muslim Mindanao, on the other hand, were provided with certified rice seeds, corn seeds, vegetable seeds, fertilizers, farm tools and training.
- Currently supporting DA in assessing drought impacts using drones capable of producing high-resolution datasets for both visual and computer-aided analyses.

Funding requirements

USD 4.6 million required to implement field-based activities, restoring the livelihoods of affected farming and fishing communities, and strengthening the capacities of the DA regional field offices and local government units to prepare people for adaptation and mitigation strategic measures. These funds would also set up early warning systems for drought and disseminate information such as farm weather bulletins.

Pacific Islands (Fiji, Solomon Islands, Tonga, Vanuatu, Marshall Islands, Palau)



Drought



Cyclone



Fisheries

Situation and outlook

- ◆ Drought is forecast for northern and western Pacific threatening the livelihoods and well-being of 1.9 million people across the Pacific.
- ◆ Tropical Cyclone Winston, hit Fiji on 20 and 21 February, severely affecting 350 000 people (40 percent of the population) and damaging 100 percent of crops in the hardest-hit areas. Total damages to crops and livestock is estimated at USD 61 million. This was followed by Tropical Cyclone Zena in early April.
- ◆ Reduced rainfall in Fiji, Tonga, the Solomon Islands and other islands have negatively affected food crops and drinking water availability.
- ◆ In Tonga, drought warnings remain in force as the rainfall outlook for the next three months is forecasted as below-normal.
- ◆ In Vanuatu, the Ministry of Agriculture carried out an El Niño impact assessment, which identified key short- and medium-term interventions.
- ◆ Federated States of Micronesia, Marshall Islands and Palau have declared a State of Emergency as a result of El Niño-induced drought conditions.
- ◆ Ten of the 16 states in Palau are most affected by drought. Significant losses to crop and livestock production has been reported. All farm irrigation activities have been suspended due to low levels of reservoir water.

Disaster associated with El Niño in 1997–1998, 2002–2003 or 2009–2010	Highest impacts recorded for a single disaster event	
	Total people affected	Total damage (USD)
Drought	(No data)	46 million damage to agriculture and infrastructure (Fiji, 2010)
Cyclone	4 000 (Fiji, 2009); 3 000 (Tonga, 1997); 2 400 (Vanuatu, 1998)	39 million (Fiji, 2010)

Pacific Islands El Niño response

Government and other partners

- In Fiji, the Government has extended the State of Natural Disaster in affected areas until 19 April, with 67 000 people currently targeted with Government water deliveries in villages and schools, especially on the outer islands. The Government is also distributing rice and tinned fish to affected communities.
- The Republic of the Marshall Islands have estimated a needs requirement of USD 3.1 million for the Food Security and Agriculture Cluster's nine-month recovery plan from February 2016. A significant proportion of this estimate is for supplemental food baskets for the affected population.
- The Government of Vanuatu has recently provided USD 480 000 in emergency El Niño funding for water, sanitation, hygiene, food security and logistics needs.

FAO

- FAO's subregional office for the Pacific is implementing a project on El Niño Drought Preparation and Monitoring in Micronesia and Melanesia, of which USD 400 000 has been received from OFDA. It focuses on assisting governments to mitigate risks to food and nutrition security.
- Farmers in Vanuatu are being trained on food preservation methods through a Belgian Trust Fund project on emergency support to re-establish agricultural production in communities affected by Cyclone Pam.
- In Fiji, a FAO multidisciplinary team is supporting the most-affected areas through three emergency response projects.
- USD 150 000 drought recovery support is earmarked for the Republic of the Marshall Islands to assist with the procurement and distribution of seeds/seedling inputs for immediate recovery of agricultural livelihoods of affected communities.

Funding requirements

USD 61 million required in Fiji to provide immediate crop, livestock and fisheries support to 25 370 cyclone-affected people.

USD 2.5 million required to support immediate drought recovery in Micronesia, Marshall Islands and Palau.



Indonesia

INFORM Rank: 55



Drought

Wildfire

Situation and outlook

- ◆ An estimated 3 million people living below the poverty line were affected by severe drought between October and December 2015, of which 1.2 million are dependent on rainfed agriculture.
- ◆ A one-month delay in the onset of the 2016 dry season is expected for most of Indonesia, meaning that the dry season will start in May/June for about half of the country.
- ◆ In the most drought-affected areas in eastern Indonesia, the 2015/16 main season paddy planting was more than 40 percent lower compared with a normal year. While total paddy area planted until February 2016 was 2 percent higher than normal nationwide, localized delays are still evident in the east of Indonesia.
- ◆ The 2015 drought affected around 570 000 ha of the 2015 secondary paddy season and damaged 210 000 ha. For the 2015/16 main season, by March 2016, around 60 000 ha of paddy fields had been affected by drought and 10 000 ha damaged. Torrential rains in early 2016 caused seasonal floods, affecting around 120 000 ha and damaging 25 000 ha of paddy fields.
- ◆ The 2015-2016 droughts reduced income for households reliant on agricultural production. The record high prices of the main staple - rice - until early 2016, further strained the food and livelihoods security of vulnerable and subsistence farming households.
- ◆ Forest and peatland fires re-emerged in Riau Province in early 2016 and more fires are expected at the end of the rainy season in May 2016, causing renewed concern about health hazards.

Disaster associated with El Niño in 1997–1998, 2002–2003 or 2009–2010	Highest impacts recorded for a single disaster event	
	Total people affected	Total damage (USD)
Drought	5 million affected (FAO/WFP 1998)	88 million (FAO/WFP 1998)
Wildfire	32 000 (1997)	8 billion (1997)

Indonesia El Niño response

Government and other partners

- A UNCT focus group for El Niño, co-led by FAO and WFP, has been monitoring impacts and identifying actions for response. In cooperation with ACAPS, key government agencies and NGO's, the focus group developed four humanitarian scenarios for likely impacts of El Niño (and possible La Niña conditions) on the food security situation in 2016. The focus group is engaging relevant line ministries to follow-up on the recommended actions for the developed scenarios.
- The Government has allocated USD 258 million to improve the national rice reserves and to stabilize the prices of staple foods. Rice imports totalling 1.5 million tonnes were authorized, with expected delivery by March 2016.
- The Ministry of Social Affairs provided an additional two-month rice ration for the Rice for Family Welfare programme beneficiaries in October.
- In 2015, the Government assigned an additional USD 57 million to the National Disaster Management Agency for fire management activities.
- The Ministry of Environment and Forestry allocated USD 14.4 million for fire prevention in 2016, which is a USD 6 million increase compared with 2015.
- In March 2016, west Sumatran province, Riau, declared a State of Emergency over forest fires and enhanced the fire prevention and management efforts.

FAO

- Food security analysts, deployed in November 2015, have been supporting interagency collaboration and the development and implementation of an El Niño Early Action Plan. This includes food security monitoring and analysis, scaling-up of drought-resilient conservation agriculture practices, fire prevention and community-based forest and peatland management.
- Collaborating with the Ministry of Agriculture and WFP in the production of a bi-monthly Food Security Monitoring Bulletin.

Funding requirements

USD 2.7 million required to upscale drought-resilient agricultural practices in the most drought-affected areas — Nusa Tenggara Timur and Nusa Tenggara Barat provinces.



Timor-Leste

INFORM Rank: 69



Drought

Outlook

- ◆ The food security situation in Timor-Leste deteriorated as the result of the negative impact of the severe drought, with current estimates indicating that 40.6 percent of the rural population, or about 345 366 people already affected. This figure is expected to increase to about 378 669 people (45.9 percent) between April and June 2016, particularly in the west, north and central highland areas of the country, with no second season crop production.
- ◆ An estimated 60 430 drought affected households reported animal deaths, including cows, buffalos and pigs due to lack of water and fodder/feed, while 21 percent or about 25 611 drought-affected households have sick animals due to erratic rainfall from February to March 2016
- ◆ The 2016 main season maize output is forecast to decrease considerably, as a result of water shortages in the northeast, southeast, and southwest coastal areas causing severe water stress. Similarly, the 2016 main paddy planting season is 30 percent lower than the same period in 2014/15, with areas in the eastern part of the country not cultivated due to severe water shortages.
- ◆ Earlier estimates indicate that around 40 percent of maize and 57 percent of rice production area, respectively, will be affected by El Niño.

Disaster associated with El Niño in 1997–1998, 2002–2003 or 2009–2010	Highest impacts recorded for a single disaster event	
	Total people affected	Total damage (USD)
Flood	600 (2003)	(No data)

Timor-Leste El Niño response

Government and other partners

- Ministry of Agriculture and Fisheries, with support from the inter-ministerial Food Security and Nutrition coordinating body issued early warning messages to raise awareness of El Niño and possible actions to mitigate potential impact.
- The Government, together with the Humanitarian Country Team (HCT), developed a preparedness and emergency response plan for El Niño. Regular monitoring and coordination mechanisms have been put in place.
- The Government has prepared 3 000 tonnes of rice and imported an additional 9 000 tonnes of rice to be distributed to 120 000 El Niño affected individuals. In addition, 140 tonnes of maize and rice seeds are to be distributed to El Niño affected farmers. The Ministry of Interior drilled boreholes in areas severely affected by drought.

FAO

- Leading the HCT El Niño desk analysis and providing regular monitoring, and advising the Government and HCT members on weather information and seasonal crop indicators.
- Provided technical support to the Ministry of Agriculture through the District Food Security Officers in conducting field monitoring on the impact of El Niño at village level.
- Distributed additional maize and cover crops seeds to conservation agriculture programme participants to replace El Niño-affected fields.
- Provided technical and financial support to the Ministry of Agriculture and Fisheries for a Rapid Household Assessment on the impact of El Niño on agriculture, in partnership with Mercy Corps and Catholic Relief Services, which is covering 7 500 households and 500 key informants.

Funding requirements

10.6 million is now required for rainwater harvesting, distribution of drought/climate-resistant seeds, promotion of climate-smart/conservation agriculture, restocking livestock, restoring livelihoods, and monitoring and increasing coverage of agrometeorology information.



Viet Nam

INFORM Rank: 85



Drought



Flood

Outlook

- ◆ 39 out of the country's 63 provinces have been affected by drought and saltwater intrusion, of which 15 provinces have declared drought and saltwater intrusion emergencies at different levels.
- ◆ 1.56 million people have been impacted by the ongoing drought, water shortage and saltwater intrusion.
- ◆ 425 900 ha of crop (including 320 000 ha of rice) have been severely affected by the drought and excess salinity, and a total of 600 000 ha could be damaged by July.
- ◆ Although at national level, the impact of the drought and salinity problems on the 2016 ongoing winter/spring season is expected to be small, in some areas that sustained serious drought damage, including Gia Lia province located in the south, this season's output is expected to fall by 70 percent compared to last year's same season harvest.
- ◆ Livestock loss of over 5 383 animals (cows, pigs, buffalo, and chickens).
- ◆ 4 641 ha of aquaculture has been damaged, with 14 453 ha at risk.
- ◆ In the most affected areas, household debt and poverty are likely to continue increasing due to loss of income-generating crops and expenditure on water for both human and livestock consumption.
- ◆ Drought is expected to continue through June 2016 in the Mekong and until September in the Central Highlands, negatively affecting the start of the autumn crop season (May-August).

Disaster associated with El Niño in 1997–1998, 2002–2003 or 2009–2010	Highest impacts recorded for a single disaster event	
	Total people affected	Total damage (USD)
Drought	3 million (1997)	407 million (1997)

Viet Nam El Niño response

Government and other partners

- The Government has submitted a request for UN and donor support in response to the drought in the Central Region and Central Highlands and to seawater intrusion in the Mekong Delta of Viet Nam.
- A multi stakeholder meeting (NGOs, UN, and Government) has been organized by the Government to prepare for the drought in the southern part of the country. The Government has declared a State of Emergency in 15 provinces.
- The Government, UN and international NGOs carried out a multi-cluster rapid assessment to better understand the immediate needs of six affected provinces. The report was released on 15 April 2016.

FAO

- The FAO Strategic Programme for Resilience committed USD 32 000 for a mission in February to assist the Ministry of Agriculture and Rural Development's Institute for Water and the Environment with the development of a set of suitable agricultural drought indices for the South Central Coast and Central Highlands of Viet Nam. It will also explore possibilities for the use of relevant, available tools from FAO for the country and the region.
- An in-depth assessment of the damages and loss caused by the drought to the food security and livelihoods of affected rural households is also under preparation.

Funding requirements

USD 5 million is required to respond to all 15 affected provinces for the next 6 months. Priorities include:

- in depth assessments on disaster impacts to address the significant information gaps;
- emergency distribution of seeds, tools and fertilizer before the coming rains (June in the Mekong Delta and August in the central highlands); and
- emergency provision of water, feed to livestock and feed storage assistance and restocking after the rains start.



Cold Wave

Situation and outlook

- ◆ Around 60 percent of the country, or 211 out of 339 districts, experienced *dzud* or near-*dzud* conditions (harsh winter preceded by drought).
- ◆ *Dzud* conditions are likely to directly affect an estimated 30 000 herder households in 98 districts. Official estimates, as of March 2016, indicate that around 830 500 livestock, mostly sheep and goats perished, which is considerably higher than last year’s estimate of 56 300 animals.
- ◆ In previous severe *dzuds*, 25-35 percent of national livestock herd (up to 10 million head) in Mongolia has been lost.
- ◆ The current *dzud* conditions are being further exacerbated by a Capri pox outbreak in the eastern region of the country. The Ministry of Food and Agriculture declared a quarantine in five provinces. Sheep and Goat Pox outbreaks have begun in parts of the country due to the poor health condition of animals.

Disaster associated with El Niño in 1997–1998, 2002–2003 or 2009–2010	Highest impacts recorded for a single disaster event	
	Total people affected	Total damage (USD)
Cold Wave	770 000 (2009)	USD 62 million (2009);

Mongolia El Niño response

Government and other partners

- The Government plans to allocate USD 5.3 million to support herders and is urgently trying to export meat to Viet Nam, China and Russia as well as up to 10 million live animals to China.
- In early January 2016, the Government released an assessment report claiming 50 *soums* (districts) in 16 *aimags* (provinces) are currently categorized as experiencing *dzud* while 120 *soums* in 20 provinces are on the edge of entering *dzud* condition.
- The International Federation of the Red Cross released USD 157 686 from its Disaster Relief Emergency Fund to assist 1 500 pastoral families (7 500 people) in Mongolia who are at risk of losing all their livestock to extreme sub-zero temperatures and heavy snowfall.
- UN/CERF and Humanitarian Country Team (HCT) support will help ensure survival of 4 390 herder households and their livestock in 44 districts of six provinces during the winter. The agriculture component for animal feed and health packages follows overall HCT response areas.

FAO

- With the Government of Mongolia, is preparing a response to the outbreaks of sheep and goat pox.
- Deployed a mission to support the development and implementation of an early action plan.

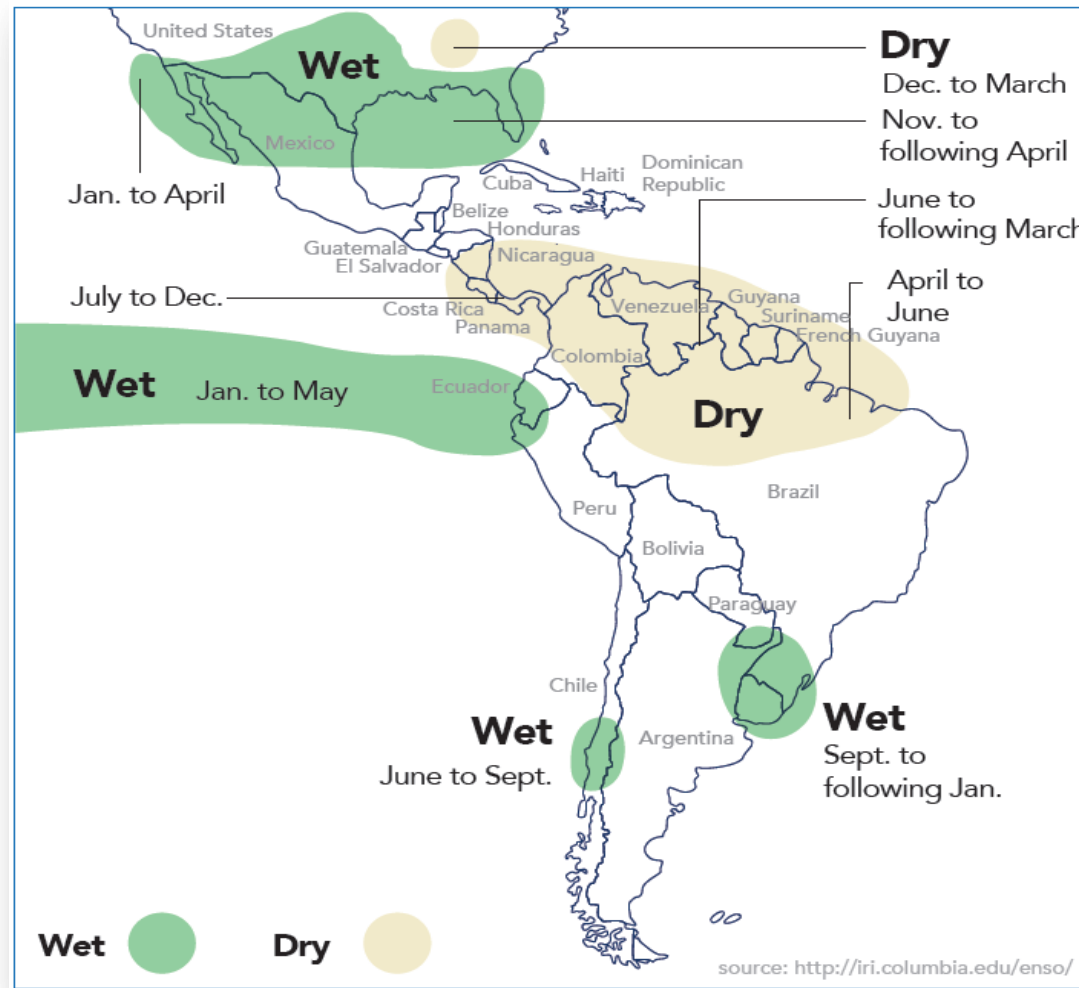
Funding requirements

USD 8 million required to assist 6 500 households, of which USD 854 000 has been committed from CERF. Priorities include partial destocking to preserve the livelihoods of vulnerable pastoral families. 60 percent of CERF inputs have been delivered including hay, wheat bran and animal health care kits. Total of 4 390 vulnerable herder households supported with humanitarian inputs

LATIN AMERICA AND THE CARIBBEAN

Historical El Niño regional trends for Latin America and the Caribbean

The Institute for Climate and Society at Columbia University has developed a typology of El Niño climatic impacts based on analysis of El Niño events over the years. The following map of Central and South America indicates the typical impacts of El Niño on the continent.



For more information on El Niño and La Niña, go to: <http://iri.columbia.edu/enso/>

Sources:

1. Ropelewski, C. F., and M. S. Halpert, 1987: Global and regional scale precipitation patterns associated with the El Niño Southern Oscillation. *Mon. Wea. Rev.*, 115, 1606-1626;
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Haiti

INFORM Rank: 22



Drought

Situation and outlook

- ◆ Approximately 3.6 million people are food insecure (34 percent of the population), and 1.5 million are severely food insecure.
- ◆ Acute global malnutrition over 15 percent in four communes.
- ◆ At least 200 000 people are in extreme food emergency situation.
- ◆ Haiti is forecast to continue experiencing extremely warm and dry conditions through to May 2016. The 2015 spring harvest fell below average with losses of up to 70 percent in some areas.
- ◆ 57 percent of the households affected by the drought in the last six months have accumulated debt, 89 percent have lost their 2015 spring harvest and only 37 percent have planted for the 2016 winter season. Of those who have planted, 43 percent forecast production losses.
- ◆ Vulnerable households in the South, South-East, North-East, North-West and Artibonite are affected by food insecurity due to the combination of failing harvest and rising food prices.
- ◆ The impact of El Niño is likely to rapidly increase the number of acutely food insecure people. At the end of 2015, some 37 communes were in Phase 3 of IPC, and this number is expected to further increase during early 2016.
- ◆ The influx into Haiti of over 50 000 people of Haitian descent from the Dominican Republic has aggravated the humanitarian situation and has pressurized scarce water and food supplies along the border.

Disaster associated with El Niño in 1997–1998, 2002–2003 or 2009–2010	Highest impacts recorded for a single disaster event	
	Total people affected	Total damage (USD)
Drought	35 000 (2003)	(no data)
Cyclone	73 000 (2010)	180 million (1998)

Haiti El Niño response

Government and other partners

- Early warning has been led by the National Committee for Food Security (CNSA), Ministry of Agriculture, FEWSNET and GIEWS. Initiatives are in place for the reinforcement of monitoring and surveillance mechanisms and to improve coordination among stakeholders.
- The Government and humanitarian community, with the involvement of technical agencies (national and departmental), are targeting rural communities, focusing on food and water distribution, rehabilitation of water supply systems, and cash-for-work activities.
- ECHO has included in the Humanitarian Implementation Plan for 2016 a dedicated response to the drought, coupled with the effects of El Niño.

FAO

- A food availability market assessment has taken place.
- Distribution of seeds and tools is ongoing in the most drought-affected Departments (South-East and North-West) through the UN's CERF system.
- Contributed to the provisional assessment of the spring agricultural season, carried out by CNSA.
- Strengthening the community adaptation capacity and improving the resilience of the agroecosystems through training, farmer field schools, implementation of good practices and techniques such as agroforestry, conservation farming, and integrated production models.

Funding requirements

USD 7.9 million required to support 35 000 rural households (175 000 people) in South-East, North-West, Artibonite, Nippes, Grande Anse and South Departments. Priorities include organizing seed fairs with subsidized vouchers for vulnerable households. In regions where seeds are not available for vulnerable households, quality seeds and planting material will be distributed. Training in nutrition education and good agricultural practices is also foreseen.



Drought

Situation and outlook

- ◆ Recent joint assessments indicate that 1.5 million people are in need of humanitarian assistance. Some 720 000 people are severely food insecure, as drought has led to a third consecutive year of decreased harvests.
- ◆ According to the Ministry of Agriculture, Livestock and Food (MAGA) and the Secretariat of Food Security and Nutrition, around 175 387 families have reported between 50 and 100 percent loss of maize and bean harvests in the Dry Corridor.
- ◆ MAGA has reported total financial losses for maize of USD 30.8 million for around 82 000 tonnes. For black beans, total losses are reported in the amount of USD 102.3 million for around 118 182 metric tonnes.
- ◆ 10 percent of people in Guatemala suffer from moderate or severe food insecurity.
- ◆ Forecasts indicate that 65 percent of families will exhaust their food supplies by April 2016.

Disaster associated with El Niño in 1997–1998, 2002–2003 or 2009–2010	Highest impacts recorded for a single disaster event	
	Total people affected	Total damage (USD)
Drought	2.5 million (2009)	(No data)
Cyclone	400 000 (2010)	748 million (1998)

Guatemala El Niño response

Government and other partners

- WFP, in conjunction with MAGA and the Secretariat for Food Security and Nutrition, is providing food assistance to 83 000 families.
- Through a food-for-work programme, the Government is supporting the creation of water reservoirs and improving local water management and soil conservation practices.

FAO

- Implementing an emergency response programme targeting 7 000 families.
- USD 500 000 through the Special Fund for Emergency and Rehabilitation Activities has been committed to the Dry Corridor (Guatemala and El Salvador) to promote actions aimed at reducing vulnerability and to increase livelihoods’ resilience in the agriculture, forestry, livestock and fisheries sectors.
- Implementing a resilience programme in the Dry Corridor to strengthen the disaster risk management capacities of the national and local authorities, establish information and early warning systems and through the watershed management plan — promote good practices and technologies, reducing the impact of extreme climate events (short cycle and drought-resistant crops, water harvesting systems, community contingency funds, agroforestry, etc.).

Funding requirements

USD 7 million required to fund immediate livelihoods restoration activities.



Drought

Situation and outlook

- ◆ Recent estimates indicate that 1 350 000 people are affected and in need of immediate humanitarian assistance.
- ◆ 15 percent of people in Honduras suffer from moderate or severe food insecurity.
- ◆ El Niño conditions forecast to last until June 2016. Emergency support to affected farming families is needed until the next harvest (August 2016).
- ◆ Preliminary estimates indicate crop losses are in excess of 60 percent in the maize growing areas and 80 percent in bean growing areas.
- ◆ Food prices were 20 percent higher than in August 2014.
- ◆ The poorest households most affected by drought-related harvest losses are expected to be severely food insecure from September 2015.

Disaster associated with El Niño in 1997–1998, 2002–2003 or 2009–2010	Highest impacts recorded for a single disaster event	
	Total people affected	Total damage (USD)
Drought	82 000 (2002)	(No data)
Cyclone	2 112 000 (1998)	3.8 billion (1998)

Honduras El Niño response

Government and other partners

- The Government declared a State of Emergency and is implementing a Drought National Action Plan for food assistance and support to production.
- 178 770 families have received food assistance.
- WFP is already providing direct assistance to 29 percent of the affected population.

FAO

- Implementing a resilience programme in the Dry Corridor and designing new projects to support affected farmers.
- The resilience programme aims to strengthen disaster risk management capacities of the national and local authorities, establish information and early warning systems and — through the watershed management plan — promote good practices and technologies, reducing the impact of extreme climate events (short-cycle and drought-resistant crops, water harvesting systems, community contingency funds, agroforestry, etc.).

Funding requirements

USD 3.4 million required to fund immediate livelihoods' restoration activities.



Situation and outlook

- ◆ Vulnerable farmers in the Dry Corridor have lost up to 100 percent of the main maize harvest (*Primera*). Moreover, the compounding effects of previous poor agricultural seasons and weakened livelihoods — and the unfavourable dry weather forecast for the first quarter of 2016 — could aggravate the situation.
- ◆ Prospects for the coming season are highly uncertain because of persisting dryness as a result of the ongoing El Niño phenomenon and a strong likelihood that soil moisture deficits will not be restored in time for planting (May/June 2016).
- ◆ If no humanitarian assistance is provided, there is a high likelihood that vulnerable farmers will face severe food insecurity from March 2016.
- ◆ White maize prices rose by 8 percent in March and were 37 percent higher than a year earlier, underpinned by low market supplies following the stagnant production in 2015. Due to El Niño conditions, below-average rainfall is forecast to last until June 2016 and it is unlikely that households will be able to recover quickly from their losses.

Nicaragua El Niño response

Government and other partners

- Government is implementing a Drought National Action Plan including distributions to 27 000 households and the delivery of 23 000 technology packages which include seeds for planting.

FAO

- Through the resilience programme for the Dry Corridor, FAO is providing technical support.

Funding requirements

Currently being assessed. The Government has not requested any emergency support from FAO.

Disaster associated with El Niño in 1997–1998, 2002–2003 or 2009–2010	Highest impacts recorded for a single disaster event	
	Total people affected	Total damage (USD)
Drought	290 000 (1997)	2 million (1997)
Cyclone	868 000 (1998)	987 million (1998)



Situation and outlook

- ◆ El Niño has caused decreased rainfall and drought in most parts of El Salvador.
- ◆ 192 000 households are facing severe acute malnutrition.
- ◆ The Ministry of Agriculture and Livestock estimates that 85 858 ha of maize have been lost or damaged. Due to irregular rainfall during 2015, 60 percent of the maize crop was destroyed. Drought has now affected 161 180 farmers, mostly maize producers.
- ◆ The current drought’s impact on the economy has increased with respect to the 2014 drought to approximately USD 100 million in 2015. This includes investment losses, which are estimated at USD 29 million in seeds, fertilizers, pesticides and land preparation.
- ◆ River levels are 20 to 60 percent lower than normal. In eastern areas, rivers are up to 90 percent lower and below average rainfall, as well as above average temperatures, are forecast to last until at least March 2016.
- ◆ 700 000 people (11 percent of the population) are suffering from moderate or severe food insecurity.

Disaster associated with El Niño in 1997–1998, 2002–2003 or 2009–2010	Highest impacts recorded for a single disaster event	
	Total people affected	Total damage (USD)
Drought	(No data)	170 million (1998)
Cyclone	90 000 (2009)	939 million (2009)

El Salvador El Niño response

Government and other partners

- The Government has distributed maize and bean seeds to farmers affected by shortages and has given assistance such as pumps. It has also authorized imports of 14 000 tonnes of maize and 550 tonnes of beans at zero tariffs to mitigate price increases.
- The Government has also distributed drought- and rust-resistant coffee plants and trained producers on the use of irrigation techniques to cope with drought.

FAO

- FAO is supporting the Ministry of Agriculture and Livestock in its long-term strategy to adapt local agriculture to the effects of climate change. Assistance focuses on local capacity development, agro-climate risk management and support for research, innovation and transfer of new technology for climate change adaptation. Other assistance includes supporting sustainable management of local basins and land tenure, outreach and education and resource mobilization for adaptation, mitigation and resilience to climate change.
- A CERF project is being implemented by FAO to rehabilitate and diversify the agricultural production of 17 785 people affected by drought.
- USD 500 000 through SFERA has been committed to the Dry Corridor (Guatemala and El Salvador) to promote actions aimed at reducing vulnerability and to increase livelihoods’ resilience in the agriculture, forestry, livestock and fisheries sectors.
- Implementing a resilience programme in the Dry Corridor to strengthen DRM capacities of the national and local authorities.

Funding requirements

USD 6.6 million required to assist affected subsistence farmers. Priorities include the distribution of seeds and inputs, rehabilitating irrigation systems and water collection-storage systems.

Additional El Niño affected countries

WEST AFRICA					
Country (INFORM rank)	Potential disaster(s)	Outlook/current situation	Early action and response	Highest impacts recorded for a single disaster event in 1997–1998, 2002–2003 or 2009–2010	
				Total people affected	Total damage (USD)
Chad (18)	Drought	<p>During 2015, most parts of the country suffered from a late start to the rainy season and poor distribution of rains. As a result, the 2015 aggregate cereal production is estimated at some 2.4 million tonnes, 12 percent below the previous year's output and 10 percent below average. At the beginning of 2016, over 3.4 million people were food insecure, 5 percent more than in 2013 or 2014, including around 707 000 severely food insecure. By the lean season in June 2016, 4.3 million people will be food insecure, including 1.6 million severely food insecure.</p> <p>Given the situation, vulnerable households in the Sahel belt are likely to enter the lean season earlier, due to a combination of reduced food and cereal stocks and higher prices on local markets.</p> <p>Pasture regeneration and water points' level in pastoral areas differs widely across the country. Livestock prices were reported to be 22 percent below the five-year average at the end of 2015.</p>	<p>Government and other partners: Strengthened support to agricultural producers through the provision of various inputs, including fertilizers, seeds, pesticides and agricultural equipment.</p> <p>FAO: Supporting the Government on monitoring the food security situation through technical assistance to food security and early warning.</p>	356 000 (Drought, 1997)	(no data)

EAST AND SOUTHERN AFRICA					
Country (INFORM rank)	Potential disaster(s)	Outlook/current situation	Early action and response	Highest impacts recorded for a single disaster event in 1997–1998, 2002–2003 or 2009–2010	
				Total people affected	Total damage (USD)
Djibouti (46)	Drought	<p>As of February 2016, the arrival of over 600 households of displaced people to the Ali Sabieh and Dikhil districts has been registered, thus doubling the population and putting pressure on already limited resources. The number of pastoralists displaced by a chronic drought is continuing to rise by up to 10 000. This migration is part of an already difficult context of malnutrition and food insecurity in Djibouti. The Poor food consumption score in rural areas varies between 51 percent and 15 percent, synonymous with a pronounced situation of insecurity. Malnutrition rates show an increase in moderate acute malnutrition and severe acute malnutrition, the most affected areas being Ali Sabieh in the south and Obock in the north. The extreme poverty rate in the country is 72.5 percent, highlighting a precarious socio-economic situation. Moreover, the persistent drought of the last decade contributed to the continued deterioration of livelihoods (lack of pasture, loss of livestock) and the acceleration of the rural exodus. Cattle possession statistics (or rather cattle loss) highlight a marked deterioration compared to the average of the last three years in rural areas, where livestock is the main source of livelihood, notably in Ali Sabieh region.</p>	<p>Government and other partners: On 4 April 2016, the Government requested emergency aid from FAO as well as other UN agencies in dealing with the pressing needs of the flux of migrants as well as the host communities who are already in a very precarious situation in the southern regions of Djibouti. Various meetings on the response to the situation took place between concerned government agencies and development partners such as UN agencies and international NGOs.</p> <p>FAO: Conducted assessment missions in the regions of concern. Following a request of assistance from the Government, FAO is in the approval process to allocate FAO's own resources (approx USD 450 000) under the FAO Technical Cooperation Programme to implement emergency protection livestock and agriculture support. In addition, under the Rapid Response Fund, FAO with other UN agencies has received USD 550 000 to provide livestock support, along with giving host communities access to purchasing power to compensate land preparation work for agricultural production and provision of agricultural tools</p>	200 258 (Drought, 2010)	(no data)

EAST AND SOUTHERN AFRICA					
Country (INFORM rank)	Potential disaster(s)	Outlook/current situation	Early action and response	Highest impacts recorded for a single disaster event in 1997–1998, 2002–2003 or 2009–2010	
				Total people affected	Total damage (USD)
Eritrea (49)	Drought	There is a severe drought in pastoral and coastal pastoral areas. Rainfall in June and July 2015 was 30-35 percent below-average. Some areas, including Foro, Gel'alo and Massawa, had almost no rain in the first two months of the wet season. The average to above-average rainfall received in August 2015 did not offset this and grazing was severely deteriorated. One million people in Eritrea are estimated to be food insecure.		(no data)	(no data)
South Africa (88)	Drought	The El Niño-induced drought has significantly affected crop and livestock production and there are indications that food prices are beginning to rise. Seven provinces in South Africa have been declared disaster drought areas. Harvesting of the 2016 summer cereal crops is expected to commence in April and current prospects indicate a sharp production decline with the maize output forecast at 7.7 million tonnes (commercial and non-commercial crop), 28 percent down from the below-average 2015 harvest. South Africa's severely reduced crop production has had serious impacts throughout the Southern Africa region due to only reduced grain exports being sent to neighbouring countries. The Government has recorded 226 583 smallholder farming households affected by drought so far. In addition, 20 999 commercial farming units have been recorded as affected.	Government and other partners: The Government has set aside ZAR 236 million (approximately USD 14.5 million) through reprioritization to alleviate the impacts of the drought.	(no data)	(no data)

ASIA AND THE PACIFIC					
Country (INFORM rank)	Potential disaster(s)	Outlook/current situation	Early action and response	Highest impacts recorded for a single disaster event in 1997–1998, 2002–2003 or 2009–2010	
				Total people affected	Total damage (USD)
Myanmar (10)	Drought in: Chin, Rakhine, Magway, Bago, Yangon, Ayeyarwady	<p>Drier than average conditions have continued since November 2015 and associated risks such as fire hazards, drought, disease and food insecurity are expected to remain until mid-2016.</p> <p>Higher than average temperatures from April to June are expected in ten of the country's 14 regions. There remains a serious risk of water shortages in many parts of the country before the next rainy season, with the Government estimating that nearly 1 000 villages encountered drinking water shortages in March 2016. There is a 50 to 80 percent probability of below-average rainfall in south and southeast Myanmar (the major rice producing areas).</p> <p>More vulnerable to the effects of El Niño are those still recovering from the 2015 floods, in particular remote and poor communities such as those in Rakhine and Chin, which were already food insecure and sustained significant infrastructure damage. In terms of food security, high temperatures, water shortages and lack of rainfall may delay the summer paddy harvest (June to October). This can lead to rice shortages and an increase in rice prices. Local rice prices averaged 37 percent higher in February 2016 than the previous year.</p>	<p>Government and other partners: Over 200 humanitarian partners are currently providing assistance to over one million people in Myanmar. This includes 460 000 people who continue to require food security support following the devastating floods in July/August 2015. In Myanmar the National Disaster Management Committee is an apex inter-ministerial body leading early warning, preparedness and response. The Government has been providing assistance in terms of water distribution, pump installation and awareness-raising activities on reserve seed storage, efficient water usage, disease prevention in crops and livestock, water pond management and other areas.</p> <p>FAO: A key component of FAO's recently approved emergency project in Chin and Rakhine states will be disaster risk reduction planning within the agriculture sector at the community and state levels, and establishing improved coordination capacity at state and national level in the food security sector. Overall, one of FAO's leading objectives in Myanmar is to increase the resilience of livelihoods in rural communities in order to withstand natural disasters.</p>	137 000 (Flood, 1997)	(no data)

ASIA AND THE PACIFIC					
Country (INFORM rank)	Potential disaster(s)	Outlook/current situation	Early action and response	Highest impacts recorded for a single disaster event in 1997–1998, 2002–2003 or 2009–2010	
				Total people affected	damage (USD)
Laos (64)	Drought Cold Wave	Due to extreme low temperatures in Laos, livestock deaths have amounted to the loss of USD 5.5 million. Preliminary data has also indicated over 4 000 livestock have been lost and thousands of ha of crops, herbal plants and fruit trees have been affected.		150 000 (Flood, 2002) 129 000 (Storm, 2009)	100 million (Storm, 2009)
Cambodia (71)	Drought	In Cambodia, water shortages are being reported and water levels in the Mekong river is low. The fisheries sector is about 17 percent below normal production levels		1.5 million (Flood, 2002) 650 000 (Drought, 2002)	70 million (Flood, 2010) 38 million (Drought, 2002)

ASIA AND THE PACIFIC					
Country (INFORM rank)	Potential disaster(s)	Outlook/current situation	Early action and response	Highest impacts recorded for a single disaster event in 1997–1998, 2002–2003 or 2009–2010	
				Total people affected	damage (USD)
Democratic People's Republic of Korea (72)	Drought	<p>The situation is exacerbated by climatic variations and frequent natural disasters, such as the 2014-15 drought and subsequent floods.</p> <p>FAO 2015 forecasts for rice production is at 2.3 million tonnes, 12 percent below last year's drought-affected output, while maize production is at 2.2 million tonnes, a drop of 15 percent.</p> <p>In June 2015, the Government reported that 31 percent (136 245 ha) of the transplanted rice areas for the 2015 harvest suffered from serious water shortages, while another 6 percent (34 339 ha) could not be planted at all because of water shortages.</p> <p>The impact of drought over two consecutive seasons was highly pronounced on crop performance in ten provinces, where production in 2015 decreased from the preceding season by a wide margin, from as low as 10 percent to as high as 51 percent. The worst drought-hit provinces ranked in the order of crop production loss were Nampo (51 percent), Changang (34 percent), N. Hwanghae (30.5 percent), S. Pyongan (25 percent), and N. Hamgyong (23 percent).</p>	<p>Government and other partners: The Government mitigated the impacts of drought to save the standing crops through different means of irrigation, which included providing concrete rings by the Government to dig temporary wells for irrigation purposes.</p> <p>FAO: Provide technical support to the Government and Humanitarian Country Team (HCT) members, along with co-chairing the Agriculture and Food Security Sector Working Group — regularly monitoring, circulating and advising the Government and HCT members on weather information and seasonal crop indicators generated from GIEWS. FAO is distributing additional cover crops seeds, soybean seeds, portable water pumps, two-wheel tractors with water tank, and chemical fertilizers in drought-affected areas.</p> <p>FAO's funding requirements total USD 9.26 million, out of which USD 1.2 million has been funded by CERF and internal resources.</p>	(No data)	(No data)

LATIN AMERICAN AND THE CARIBBEAN					
Country (INFORM rank)	Potential disaster(s)	Outlook/current situation	Early action and response	Highest impacts recorded for a single disaster event in 1997–1998, 2002–2003 or 2009–2010	
				Total people affected	Total damage (USD)
Colombia (25)	Drought	<p>El Niño climatic conditions are aggravating the chronic drought situation, which is affecting different areas of the country.</p> <p>Over 40 municipalities are facing water shortages due to high temperatures and limited rainfalls, and the northeast department of Sucre has declared public calamity. Thirteen departments continue to be on red alert for forest fires due to high temperatures and dry conditions. The situation is more severe for the semi-nomadic herders living in the northern parts of the country, in departments such as La Guajira, which have registered a rain deficit ranging from 40 to 78 percent of the average. Vulnerable herders have lost between 50 to 90 percent of their livestock, and the closure of the Venezuelan border is aggravating their situation.</p>	<p>FAO:</p> <p>Focusing its intervention in the most drought-affected departments, such as Guajira. Activities include protecting livestock assets, establishing seed banks, and recovering farming and livestock assets of indigenous communities.</p>	100 000 (Drought, 1998)	(no data)

LATIN AMERICAN AND THE CARIBBEAN					
Country (INFORM rank)	Potential disaster(s)	Outlook/current situation	Early action and response	Highest impacts recorded for a single disaster event in 1997–1998, 2002–2003 or 2009–2010	
				Total people affected	Total damage (USD)
Peru (48)	Flood Cold Wave Fisheries	Heavy rains linked to El Niño swamped Peru in February resulting in flooding affecting homes and croplands. The National Institute of Civil Defense reports that freezing temperatures and snowfall left more than 1 200 people homeless in nine departments, as well as 487 600 people affected in Puno and Pasco. It is estimated that 221 120 cattle are lost and 392 920 affected. The cold wave damaged 128 970 ha of crops.	<p>Government and other partners: The Peruvian Red Cross is assisting 2 000 families, as part of its German-supported ‘Forecast-based Financing’ programme, owing to an El Niño-induced heavy rain and flash floods that swept across more than half the country’s administrative regions. The Government has been implementing an El Niño National Action Plan as well as a National Disaster Risk Management and Climate Change Adaptation Plan for Agriculture (PLANGRACC-A)</p> <p>FAO: FAO supported the Government in designing the PLANGRACC-A and is now providing technical assistance to implement a drought observatory for early warning and action.</p>	236 000 (Flood, 2009); 1.8 million (Cold Wave, 2003)	
Ecuador (67)	Flood Fisheries	Since the beginning of 2016 several floods, landslides and tide surges have triggered national-scale events that have directly impacted the population and the infrastructure. The Ministry of Agriculture, Livestock, Aquaculture and Fishing reported losses of USD 2.76 million over this period.		54 000 (Flood, 2002)	271 million (Flood, 1997/1998)

LATIN AMERICAN AND THE CARIBBEAN					
Country (INFORM rank)	Potential disaster(s)	Outlook/current situation	Early action and response	Highest impacts recorded for a single disaster event in 1997–1998, 2002–2003 or 2009–2010	
				Total people affected	Total damage (USD)
Bolivia (89)	Drought in highlands Floods in centre and east	<p>Bolivia has been facing a combination of flooding and drought risk due to El Niño. The locality of Guanay was recently affected by floods but in other parts of the country rains, such as the high plateau and the Chaco region amongst others, are below average. A cold wave and hail has also affected about 60 000 families in different parts of the country including the Departments of La Paz, Oruro, Chuquisaca, Potosi and Cochabamba heights. Some 854 000 animals, especially llamas and sheep, have been lost.</p> <p>Sowing of the main 2015/16 summer season maize crop was concluded in early December. Latest estimates point to a 27 percent contraction from last year's level to 80 000 ha, mainly reflecting low market prices.</p>	<p>Government and other partners: The Government plans to import the required staples to ensure food security, and it plans to mobilize drilling teams and equipment in drought-affected areas to ensure drinking water for people and animals, with river and drain dredging in areas affected by flooding. The Government has drafted a National Emergency Plan for the El Niño Phenomenon 2015-2016 with a budget of almost USD 21.5 million, 54.5 per cent of which is allotted to preparedness actions, 11.5 per cent to response and 34 per cent for reconstruction. The Government has so far supported 11 152 families —primarily with food items.</p> <p>FAO: FAO continues its work to build resilience to climate and disaster risk through several initiatives. For example, it is contributing to the development of a national early warning system for vulnerable rural families in the High Andes zone and in Beni. It is also building the capacities of indigenous communities and organizations to prepare and respond to threats and disasters in Mamore and Beni watersheds and plans to scale up its work to meet the needs of vulnerable people facing El Niño through other upcoming projects.</p>	625 000 (Drought, 2010); 12 000 (Cyclone, 2002)	100 million (Drought, 2010)

LATIN AMERICAN AND THE CARIBBEAN					
Country (INFORM rank)	Potential disaster(s)	Outlook/current situation	Early action and response	Highest impacts recorded for a single disaster event in 1997–1998, 2002–2003 or 2009–2010	
				Total people affected	Total damage (USD)
Dominican Republic (93)	Drought	Some 1.6 million people have been affected by drought in the Dominican Republic. In parts of the country, rain deficits have led to a 60 percent decrease in crop production as well as livestock deaths.	FAO: In October to December 2015, FAO conducted a mapping of the effects of the drought on the agricultural and livestock sectors and the livelihoods of producer's families in Monte Cristi.	(no data)	(no data)
Guyana (112)	Drought	Below-average rainfall anticipated to continue into March 2016.		607 000 (Drought, 1997)	29 million (Drought, 1997)
Paraguay (142)	Floods	Intense rainfall during November and December 2015 led to flooding of Paraguay, Parana and other minor rivers. Flooding has affected several departments, of which four (Concepcion, San Pedro, Presidente Hayes, Ñeembucú) have registered livelihoods and production losses across farming communities (approximately 7 300 farmers affected, according to Government sources). Early forecasts for the 2016 maize crop, currently being harvested, point to an almost 36 percent decrease in production from last year's record level. At the forecasted level of almost 3.3 million tonnes, this year's output would be close to the average of the past five years.	Government and other partners: In January 2015, the Government of Paraguay assisted nearly 16 000 households affected by floods. FAO: Following a request of assistance from the Government, FAO allocated USD 500 000 from the Technical Cooperation Programme emergency funds to assist affected farmers in the Presidente Hayes department. It is also providing technical and methodological assistance to the Government to develop a national Disaster Risk Management Plan for the agriculture sector and to establish an agroclimatic risk monitoring system.	200 000 (Drought, 2009)	(no data)

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				Total people affected	Total damage (USD)
Eastern Caribbean	Drought	<p>The El Niño event is expected to continue to limit rainfall in the eastern Caribbean until March 2016. Drought warnings have been issued for Antigua and Barbuda, Barbados, Dominica, northern Guyana, St. Kitts and Nevis, Saint Lucia, St Vincent and the Grenadines, Trinidad and Tobago and northern Suriname. Forecasts are predicting a particularly severe dry season during January to March 2016. In Antigua and Barbuda, the main reservoir supply water for agriculture (Potworks Dam) is dry. Currently, 92 percent of water used is desalinated because of the low surface supply. Severe drought has been experienced for two years. In Barbados, the parishes of St. George and St. Phillip have been without water. Restrictions were placed on the use of irrigation systems and washing of cars. Farmers were urged to conserve water. In August 2015, St. Kitts and Nevis reported that the country was in “a full blown crisis situation” with respect to water supply. Rationing is being implemented as all aquifers on the island are being pumped at maximum capacity. Severe drought conditions and record high temperatures have affected farmers in Jamaica and water is being rationed. In St Vincent and the Grenadines, extended drought conditions was experienced by farmers in 2014/15. Because of the lack of rainfall, water conservation measures are enforced. In Dominica, damage from Tropical Storm Erika in August 2015, cost USD 3.6 million in crops and over USD 1.5 million in farm equipment, livestock and fishing. Farming practices that require moisture such as transplanting of vegetables and weeding were delayed due to limited rainfall during the first half of December.</p>	<p>Government and other partners: Contingency plans are being implemented, which includes water delivery and water storage containers, as well as public awareness in Barbados, Grenada, Guyana, Montserrat, St. Kitts and Nevis.</p> <p>FAO: In Dominica, FAO committed USD 300 000 from the Technical Cooperation Programme emergency funds for immediate assistance to restore agricultural productivity. Fields will be restored and tools distributed.</p>		

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