



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

Rome, 2016

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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 5-27) and other countries at risk (pp 28-41). 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 forecast 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 and does not aim to be exhaustive (*FAO, government statements, UN/NGO reports*) as such it will evolve as the situation progresses.

Regional highlights

Africa

- Ethiopia – an estimated 10.2 million people need food assistance in 2016. Crop and livestock production has dropped by 50 to 90 percent in some areas and 7.5 million farmers and pastoralists need immediate humanitarian agricultural production support.
- Somalia – flood prevention measures by FAO have safeguarded some 9 000 hectares of farm land, which produces enough maize to feed 2 million people for a month – worth USD 6.5 million
- Southern Africa – an estimated 28 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.

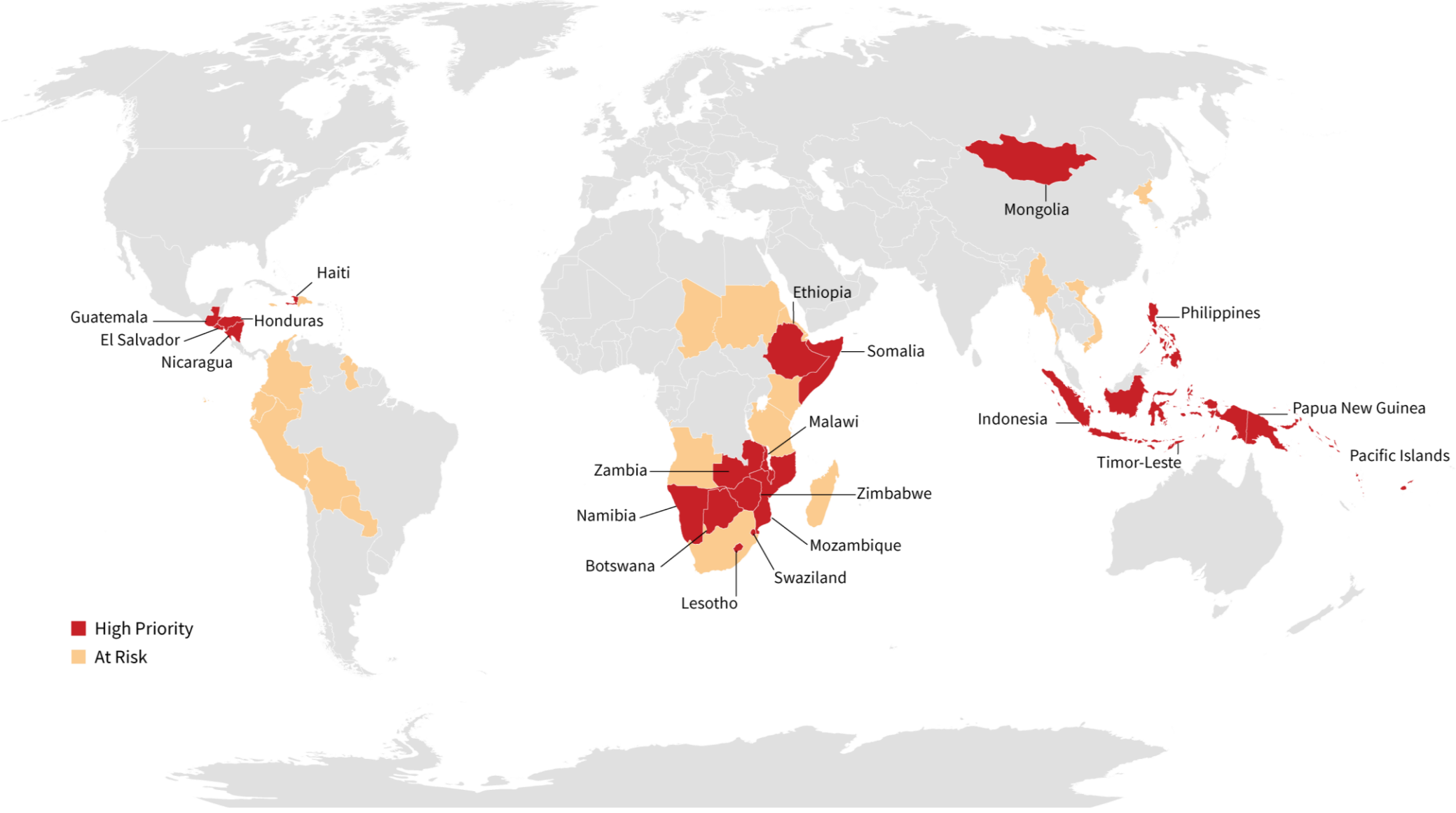
Latin America and the Caribbean

- Haiti – an estimated 3.6 million are food insecure. The 2015 spring harvest has resulted in 70 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. Losses range from 50 to 100 percent in several areas of the Dry Corridor countries – El Salvador, Guatemala, Honduras and Nicaragua.

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 80 percent lower than normal. In 2015, fires burnt 2.6 million hectares 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.
- Mongolia – 16 of Mongolia's 21 provinces are experiencing an extremely harsh winter *dzud* which has led to very high numbers of livestock deaths and disease.

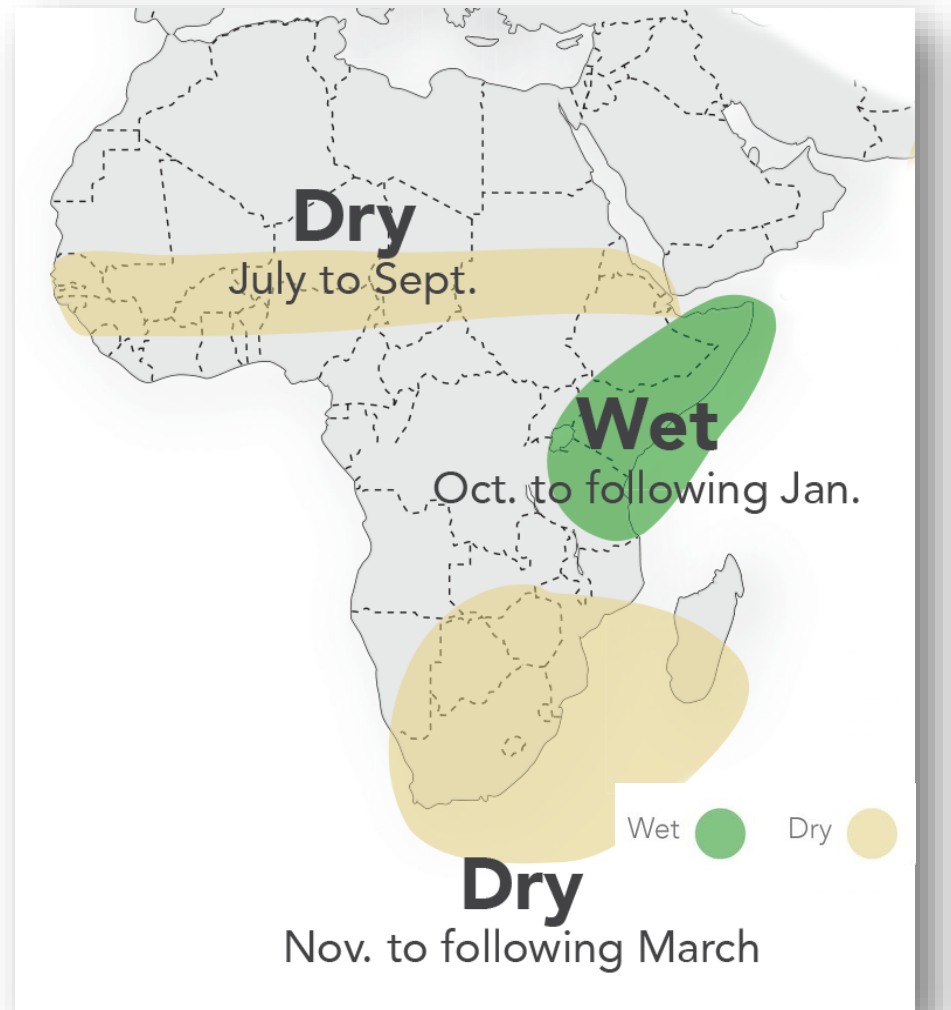
2015–2016 El Niño FAO priority countries



■ High Priority
■ At Risk

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



Floods in south-centre



Drought in north



Animal Losses

Situation and outlook

- ◆ Nearly 4.7 million people, 38 percent of the country, are acutely food insecure and need humanitarian assistance to June 2016.
- ◆ Farmers and herders are the most affected by El Niño, since it came on the heels of a poor 2015 *Gu season* cereal harvest (25 percent below the last five-year average). In the northwest, many communities face a fourth consecutive season of poor rains. Cereal production in these areas was even lower (63 percent below the last four-year average) and livestock herds have diminished. An estimated 65 percent of Puntland face drought conditions.
- ◆ El Niño conditions brought increased rainfall to large areas of southern and central Somalia and below-average rains in a few areas of the south and north. The rains peaked in the second half of October with a significant reduction in the second half of November. Heavy rains in some southern and central areas led to flash floods and riverine flooding, affecting more than 145 000 people.
- ◆ Some 215 000 people in Puntland and 480 000 in Somaliland face acute water and pasture shortages in drought-affected areas.
- ◆ El Niño-induced drought in northern pastoral areas will continue to be a major driver of food insecurity through June 2016. In Somaliland, people have lost 80 percent of their animals due to the extreme drought.

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.

FAO

- Implementing the El Niño Preparedness and Early Response Plan.
- DFID committed GBP 1 million to strengthen riverbanks, build flood barriers, pre-position grain and seed protection bags and support livestock health.
- Re-programmed USD 300 000 for cash-for-work activities, involving 2 800 households, which focused on repairing river breakages in over 50 locations.
- The return on investments of these interventions has been extremely high. An average of 9 000 hectares of farmland, which suffered from previous flooding, has been spared this time. This land produces on average 22 750 metric tonnes of maize, enough to feed about 2 million people for a month, and worth locally GBP 4.6 million (USD 6.5 million).
- Disseminated early warning messages to farmers and established community-based early warning systems.
- 11 000 households received material and training to build elevated storage platforms.

Funding requirements

USD 57.6 million required to fully implement the FAO Somalia’s El Niño Response Plan, of which USD 2.6 million is already mobilized. Priorities include:

- Floods: repairing infrastructures and flood control measures; desilting irrigation canals; livelihoods diversification and rehabilitation.
- Drought: livestock emergency treatment and vaccination; restocking of livestock; and improving water management at community level.



Ethiopia

INFORM Rank: 13



Drought in northeast



Animal Losses

Situation and outlook

- ◆ The Ethiopia Humanitarian Country Team (HCT) and the Government identified 10.2 million people in need of food assistance throughout 2016. Moreover, 400 000 people are likely to face severe acute malnutrition.
- ◆ Strong drought (very severe in Northern Pastoral Zone, severe in Eastern Highlands Agricultural Zone) conditions emerged due to the combination of failed spring rains and El Niño-induced failed summer rains.
- ◆ Crop and livestock production has dropped by 50 to 90 percent in some areas and failed completely in others.
- ◆ An estimated 7.5 million farmers and pastoralists need immediate humanitarian agricultural production support and seed reserves are severely depleted following unsuccessful planting and re-planting.
- ◆ In pastoral areas, over 1 million livestock have died, with 1.7 million more reported at risk.
- ◆ Latest meteorological forecasts indicate that the *belg* rains are expected at average to above-average levels in most cropping areas of SNNPR and southern Oromia Region, while lower rainfall amounts are forecast to be received in eastern Amhara woredas of North Wollo, South Wollo and North Shewa.

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 prepared an EL Niño Disaster Preparedness and Response Road Map, allocating USD 192 million and 220 000 tonnes of food.
- The Ethiopia Humanitarian Country Team prepared a disaster appeal in September, identifying USD 237 million to preposition supplies for the first quarter of 2016. Humanitarian actors are appealing for USD 228 million by 15 March to avoid a food pipeline break for 7.6 million people in April/May.
- Humanitarian partners and the Government prepared the 2015 National Flood Contingency Plan for the *bega* season, which highlights prone areas, key interventions and partners.

FAO

- Supported the Agricultural Task Force in developing the Ethiopia El Niño Response Plan (ENRP 2015–2016),
- As part of the emergency response, FAO is providing planting materials to help seed- and food-insecure households in the worst affected regions plant in the *belg* and *meher* seasons.
- Survival animal feed and support has been provided to produce fodder and improve access to water for livestock. In Ethiopia's Somali Region, FAO supported 4 500 households in nine pastoral communities through the purchase of livestock and provision of meat.
- FAO is also closely working with the Government to conduct seasonal assessments and develop preparedness and response plans, along with guidelines for emergency agriculture support.

Funding requirements

USD 50 million required to fully implement FAO Ethiopia's El Niño Response Plan to assist 1.8 million pastoralists, agropastoralists and smallholder farmers. Priorities include distribution of crops seeds for the upcoming *Meher* season; emergency livestock feed, restocking 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 600 000 people currently require food assistance.
- ◆ Drought is affecting mostly southern and central regions of Mozambique. Worst affected provinces are Maputo, Gaza, Inhambane, Tete and Sofala.
- ◆ The Government estimates that food insecurity could reach 1.8 million in 2016
- ◆ Delayed (up to 40 days) and insufficient rains across most regions resulted in below-average vegetation conditions and lowered 2016 production prospects.
- ◆ Strong rains in the north have resulted in several deaths and affected around 19 000 people.
- ◆ The Government estimates that 261 000 farmers and an average of 530 000 hectares of agricultural land are affected by drought. Moreover, 300 000 heads of livestock are at risk due to drought conditions.
- ◆ Weather 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)

Mozambique El Niño response

Government and other partners

- A contingency plan has been put in place by the Government for 2015–2016, which includes El Niño response activities.
- 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; and
 - assisting farmers through the implementation of livestock marketing incentives scheme.

FAO

- Supporting coordination efforts with the Humanitarian Country Team.
- Developing a programme targeting the Gaza province with crop and livestock support.

Funding requirements

USD 5 million required to assist 648 000 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 in south

Situation and outlook

- ◆ In late December, dry conditions led to crops experiencing moisture stress, particularly in the southern areas. Drier than average conditions are expected to continue with national and regional forecasts showing erratic and lower rainfall patterns than normal. Increased shortfalls in maize production is likely.
- ◆ Overall, 2015 cereal production is estimated at a below-average level of 3.1 million tonnes, about 21 percent lower than the record 2010-2014 average. Reductions in area planted for the current season are estimated to be sharper in the southern region, around 60 percent below average.
- ◆ 2.8 million people require food assistance in 25 districts, up from 640 000 people in the previous year. Over 47 percent of children under the age of five are currently malnourished.
- ◆ The national average maize price reached a record level in December 2015 – nearly double its value in the previous 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

- The Government declared a state of emergency in September 2015 and will import 56 000 metric tonnes of maize to stabilize local markets.
- 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, which appealed for USD 146 million to cover urgent food security, agriculture, nutrition and protection 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.

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.
- Funding from DFID has been received to support affected farmers with small livestock and vaccination in preparation for the impact of El Niño.
- Almost USD 2 million has been mobilized from CERF for distributing agricultural inputs such as disease-free sweet potatoes vines, cow peas, improved sorghum and millet seed, maize seed and rice to 42 000 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-base livelihoods, protecting and enhancing livestock production, increasing water access through improved infrastructure, and information, coordination and 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, 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

- ◆ Rural food insecurity, at the current peak of the lean season, has increased from 1.5 to 2.8 million people, which corresponds to 30 percent of the rural population.
- ◆ 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 metric 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, for 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 of Zimbabwe.

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.
- ◆ More than 578 000 people (almost a quarter of the total population) are currently food insecure.
- ◆ Conditions of the 2016 cereal crop, to be harvested from May, are generally unfavourable, reflecting delayed planting and insufficient rains during the 2015/16 cropping season that have compounded the impact of the dry conditions of the previous season.
- ◆ 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	(no data)	(no data)

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 hectares 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. Parliament also provided an additional N\$530 million (USD 37 million) for drought relief for the period 15 November 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

- ◆ Over 535 000 people are at risk of food insecurity up to June 2016 (one in every four people in Lesotho), and is likely to increase beyond 725 000 people after June 2016.
- ◆ A very intense drought is ongoing due to below normal rainfall and above average temperatures across most of Lesotho. Dry conditions prevented most farmers from planting during the last cropping season (Aug-Dec 2015). Furthermore, a cold spell in November 2015 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 six months.
- ◆ The food security situation is likely to worsen on account of an expected production decline, poor livestock conditions and higher maize prices.

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 funding needs at USD 18 109 546 for implementation of activities in 2015–2016.
- 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.

FAO

- FAO has been prioritizing strengthening national capacity for response while providing overall coordination support. In addition, 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.

Funding requirements

USD 7 million required to assist 158 000 drought-affected households, of which USD 1.1 million has been pledged by ECHO. Priorities include providing social protection, distributing emergency inputs for home gardening and nutrition enhancement; protection and restoration of livelihoods through recovery seed production packages; 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)



Drought

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 per cent between July and December 2015.
- ◆ The lack of rainfall in certain parts of the country is expected to reduce the cereal production. There is currently already an estimated reduction of maize production of 31 percent compared with the 2014–2015 harvest.
- ◆ 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 low rains received, combined with the high temperatures, many planted crops are experiencing some moisture stress.
- ◆ Reports indicate approximately 20 000 cattle have died due to the effects of drought.

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)

Swaziland El Niño response

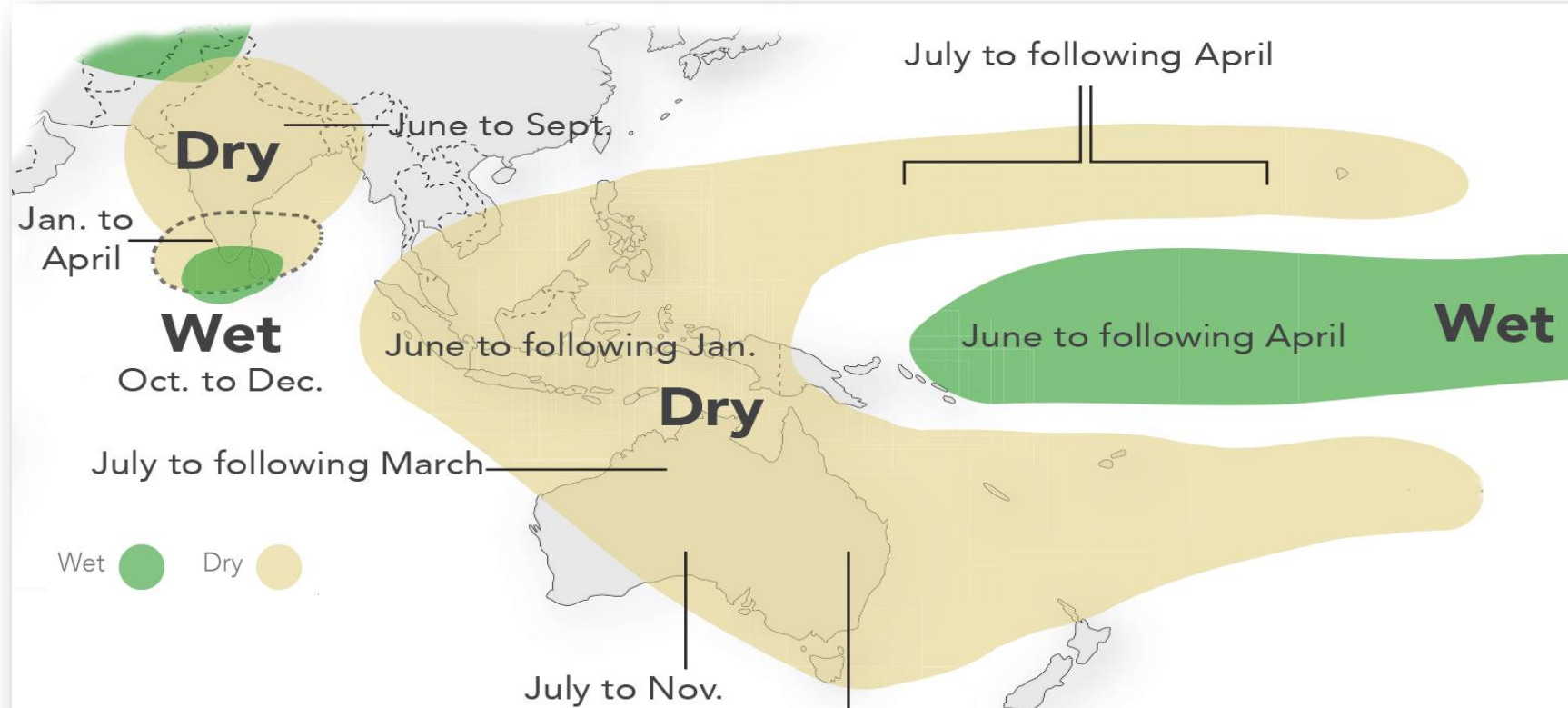
Government and other partners

- The Government declared a national state of emergency on 18 February.
- Water restrictions have been put in place by the Government, reflecting lower-than-normal rainfall and reservoir levels.

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.

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.
- ◆ Crop yields are declining and diseases are increasing. Reduced food availability due to crop losses and accessibility of food (drastic increase in basic food prices in markets) has resulted in reduction of meals to one per day in the most affected areas.
- ◆ Insect and animal infestation of crops have been reported in some areas in the southern region.

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	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 metric 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 the 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

- ◆ Rainfall distribution in March is expected to be below to way below normal in most parts of the country. The outlook for March indicates that 19 provinces will likely experience drought while 13 provinces may experience a dry spell.
- ◆ In February, the Department of Agriculture reported USD 83.7 million worth of total damage and production losses in crops – with 304 104 metric tonnes of crops lost including rice, corn and high value banana and rubber.
- ◆ More than 100 000 farming households are affected and may need support to recommence their farming activities in the next cropping season.
- ◆ Most parts of Luzon and Visayas (Northern and Central Philippines) island groups received near to above normal rainfall in February while most parts of Mindanao experienced way below to below normal rainfall during the same period. Five provinces were affected by dry spells while 18 provinces (mostly from Mindanao) experienced drought in February. This comes in addition to the provinces in other areas of the country that were affected in 2015 and early 2016.
- ◆ Grassfires in General Santos City and Cotabato City (Mindanao, Southern Philippines) have been reported in February due to prolonged dry conditions and warmer than average temperatures.

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.

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.
- Conducted regional climate fora for agriculture on El Niño together with the DA and Philippine Astronomical Geophysical Services Administration (DOST-PAGASA) and provided the UNCT and UNHT with updates on the projected impact.
- 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 Government in Rapid Damage and Needs Assessment and provided typhoon (Koppu and Melor) and drought-affected farmers with emergency interventions. Typhoon and drought-affected farmers in Nueva Ecija, Pampanga, Tarlac and Aurora provinces (Northern Philippines) 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.

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)



Drought



Cyclone



Fisheries

Situation and outlook

- ◆ Drought is forecast for northern and western Pacific threatening the livelihoods and well-being of 4.7 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.
- ◆ Reduced rainfall in Fiji, Tonga, the Solomon Islands and other islands is affecting crops and drinking water.
- ◆ In Tonga, drought has been declared and further low rainfall is expected.
- ◆ In Vanuatu, the Ministry of Agriculture carried out an El Niño's impact assessment, which identifies also key short and medium terms interventions
- ◆ In the Republic of the Marshall Islands, 23 percent of people are experiencing severe drought.

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, a 30-day State of Natural Disaster was declared from 22 February. 67 000 people are 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.
- Samoa has declared a metrological drought and asked people to conserve water.
- Vanuatu's Ministry of Agriculture estimates a requirement of USD 935 000 for immediate response to El Niño's impact on agriculture.
- On 3 February, the Republic of the Marshall Islands declared a state of emergency.

FAO

- FAO's sub-regional office for the Pacific is already implementing the El Niño Drought Preparation and Monitoring in Micronesia and Melanesia, for which USD 400 000 has been received from OFDA. It focuses on assisting governments to mitigate risks to the food and nutrition security of vulnerable households.
- 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, emergency assistance is being provided to 1 050 households and to rehabilitate 20 nursery facilities. In addition, USD 300 000 is being provided to help the Government of Fiji prevent the spread of zoonotic diseases that are not only endangering human and animal health but also with grave economic consequences. FAO is targeting the most affected communities to provide access to construction timber, facilitate the reconstruction of houses, provide employment and income-generating opportunities; and provide support to affected fishery households.

Funding requirements

- **USD 2.89 million** required in Fiji to provide immediate crop, livestock and fisheries support to 25 370 cyclone-affected people.
- **USD 500 000** required in Micronesia and Melanesia for El Niño drought food insecurity monitoring, preparedness and support.



Drought



Wildfire

Situation and outlook

- ◆ Drier than normal conditions and late onset of the monsoon season caused major delays in planting of the 2015–2016 main season crops.
- ◆ National level paddy planting was 25 percent lower than usual between October and December 2015. In the most drought-affected areas in eastern Indonesia, paddy planting was up to 80 percent lower than normal. This will mean late crop harvesting and extended lean season. Lower than usual production levels of rice and maize are expected in early 2016.
- ◆ Continued erratic rainfall in eastern Indonesia, negatively affecting the condition of the main season crops, will likely result in localized production losses.
- ◆ Reduced income and record high prices of main staple - rice - are rising concerns for a large number of vulnerable and subsistence farming households.
- ◆ An estimated 3 million people living below the poverty line have been affected by severe drought between October and December 2015, of which 1.2 million are reliant on rain-fed agriculture.
- ◆ Between 1 and 6 March, nine districts in seven provinces experienced flooding as a result of torrential rains, resulting in more than 1 620 houses being inundated for several days.
- ◆ The 2015 fires burnt 2.6 million hectares of forest and agricultural land. Underground fires that continue to smoulder in the deep peatlands are expected to re-emerge in the end of the rainy season in 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	5 million affected (FAO/WFP 1998)	88 million (FAO/WFP 1998)

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, the group will conduct a humanitarian scenario building exercise in February 2016.
- The Government has allocated USD 258 million to improve rice state reserves and 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 program beneficiaries in October.
- The Ministry of Health is conducting a national nutrition survey for under five years old, with preliminary results expected in February 2016.
- The Government has established the Peatland Restoration Agency to manage peatland restoration of 2 million hectares in seven provinces within five years.

FAO

- Food security analysts, deployed in November 2015, have continued to support interagency collaboration and the development and implementation of an El Niño Early Action Plan. This includes food security monitoring and analysis, scale-up of drought-resilient agriculture cultivation practices, fire prevention and forest and peat-land management.
- Collaborating with the Ministry of Agriculture and WFP in the production of a monthly Food Security Monitoring Bulletin.

Funding requirements

USD 2.7 million required to upscale drought-resilient agricultural practices in the most drought-affected areas — NTT and NTB provinces.



Timor-Leste

INFORM Rank: 69



Drought

Outlook

- ◆ The livelihoods of an estimated 150 000 people are severely impacted by El Niño.
- ◆ Rainfall in East Timor has been erratic, although in mid-January to March 2016 it has improved in most of the areas except Oecusse.
- ◆ Maize condition in the northeast, southeast, and southwest coastal areas are severely under water stress.
- ◆ Main season rice planting is slowly progressing; the current national level progress is between 40 percent to 50 percent.
- ◆ Some areas experienced flooding that destroyed nearly 50 hectares of rice fields particularly in the western side of the country.
- ◆ Farmers who planted maize early have started harvesting, of which some harvests are being sold in the local markets, although some areas remain in a lean period
- ◆ The implications for maize and rice production forecast that around 40 percent and 57 percent respectively of the overall production area will be affected by El Niño, likely impacting 220 000 rural people.

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 Humanitarian Country Team (HCT) analysis, developed the preparedness plan on 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 rice to be distributed to El Niño affected families. In addition, 140 tonnes of maize and rice seeds to be distributed to El Niño affected farmers. The Ministry of Interior bore water holes in areas severely affected by drought.

FAO

- Leading the HCT El Niño desk analysis and providing regularly monitoring, and advising the Government and HCT members on weather information and seasonal crops 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 in villages,
- Distributed additional maize and cover crops seeds to conservation agriculture programme participants to replace those El Niño-affected fields.
- Provided technical and financial support to the Ministry of Agriculture and Fisheries for a Household Rapid Assessment on the Impact of El Niño to Agriculture in partnership with Mercy Corps and CRS that is covering 7 500 households and 500 key informants.

Funding requirements

USD 5 million required to up scale the drought-resilient agriculture practices (conservation agriculture) and restoring the livelihoods of affected farming communities. USD 500 000 is required to implement El Niño and Food Security monitoring in 2016.



Mongolia

INFORM Rank: 116



Cold Wave

Situation and outlook

- ◆ Around 60 per cent of the country, or 211 out of the total of 339 districts, is in *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. To date, 187 966 animals perished because of the heavy snowfall, severe storms and cold weather conditions.
- ◆ According to the National Emergency Management Authority, snow has covered 90 percent of the total territory and conditions are getting more severe, with snow cover between 10 to 350 cm and temperatures -40° C to -50° C.
- ◆ In previous severe *dzuds*, 25-35 percent of national livestock herd (up to 10 million heads) in Mongolia has been lost.
- ◆ Oversaturation of livestock and livestock products in the national market has caused price decreases of 40 to 60 percent exacerbating household debt.
- ◆ The current *dzud* conditions are being further exacerbated by Capri pox outbreak in the eastern region of the country. The Ministry of Food and Agriculture declared quarantine in five provinces.

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 CHF 158 000 (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 HCT CERF action 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

- Compiling winter preparedness information to highlight gaps in areas where winter may be difficult.
- Deployed a mission to support the development and implementation of an early action plan.

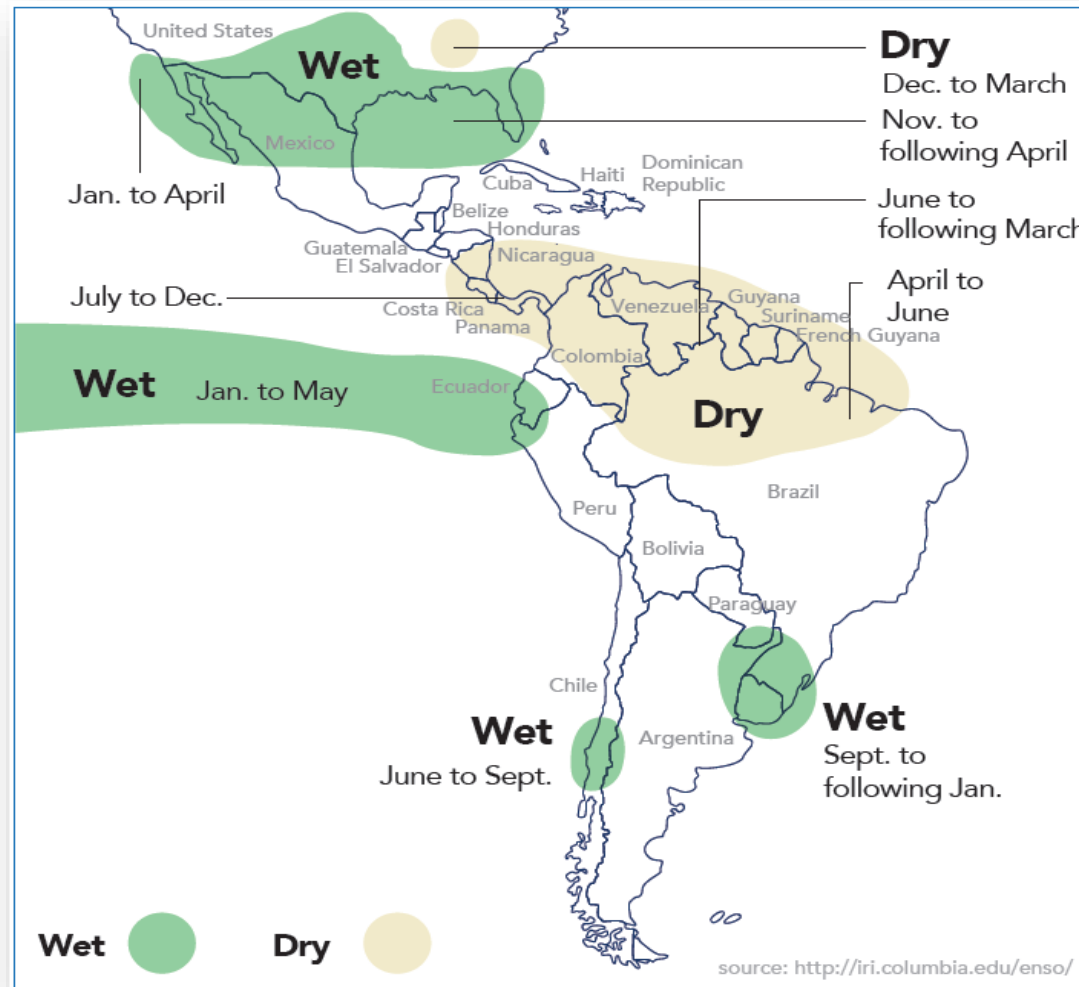
Funding requirements

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.

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;
2. Mason and Goddard, 2001. Probabilistic precipitation anomalies associated with ENSO. *Bull. Am. Meteorol. Soc.* 82, 619-638



Haiti

INFORM Rank: 22



Drought

Situation and outlook

- ◆ About 3.6 million people are food insecure (34 percent of the population). Approximately 1.5 million people are severely food insecure.
- ◆ 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.
- ◆ 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 acute 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 seed 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 spring agricultural season carried out by the CNSA.
- Strengthening the community adaptation capacity and improving the resilience of the agro-ecosystems 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 some 1.5 million people are in need of humanitarian assistance.
- ◆ 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 to 100 percent loss of maize and bean harvests in the Dry Corridor.
- ◆ Total financial losses for maize are reported by MAGA in the amount of USD 30.8 million for around 82 000 metric 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 are suffering from moderate or severe food insecurity.
- ◆ Forecasts indicate that 65 percent of families will exhaust food supplies by April.

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 the Ministries of Agriculture, Livestock and Food and Food and Nutrition Security, 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 SFERA has been committed to the Corridor Seco (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 Corridor Seco to strengthen DRM 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 for funding 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 are suffering from moderate or severe food insecurity.
- ◆ El Niño conditions forecast to last until June 2016. Emergency support to affected family farmers is needed until next harvest (August 2016).
- ◆ Preliminary estimates indicate crop losses are in excess of 60 percent in the maize growing areas and 80 percent in the bean growing ones.
- ◆ Food prices were 20 percent higher than in August 2014.
- ◆ Poorest households most affected by drought-related harvest losses are expected to be severely food insecure from September.

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 Corridor Seco and designing new projects to support affected farmers.
- The resilience programme aims to strengthen DRM 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 for funding immediate livelihoods restoration activities.



Drought

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 — might aggravate the situation.
- ◆ If no humanitarian assistance is provided, there is a high likelihood that vulnerable farmers will face severe food insecurity from March 2016.
- ◆ Wholesale prices of white maize in late 2015 were 40 percent higher than the previous year.
- ◆ Due to El Niño conditions, below-average rainfall is forecast to last until June 2016 and is unlikely that households will be able to recover quickly from their losses.

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)

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 Corridor Seco, FAO is providing technical support.

Funding requirements

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



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 hectares of maize have been lost or damaged (equal to 4.7 million hundredweight of production). 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 the 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 in its long-term strategy to adapt local agriculture to the effects of climate change. Assistance is focusing 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 providing 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 Corridor Seco (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 Corridor Seco 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

NEAR EAST AND NORTH 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)
Sudan (7)	Drought; Animal disease	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. National 2015/16 cereal production is about 25 percent below the recent five-year average, in part due to El Niño-related dryness in eastern surplus-producing areas. Between March and September 2016, more than 4 million people will be in Crisis (IPC Phase 3) or worse. Based on the joint analysis made by FAO and the Ministry of Livestock about 8.4 million heads of livestock require immediate support with inputs and services including 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.	Government and other partners: Closely monitoring the situation; preparing to conduct a post-harvest assessment. HCT has prepared a three-month Multi-sectoral Mitigation and Response Plan. FAO: Supported various assessments and the preparation of response plans. A CFSAM has been conducted in December 2015, with results currently being endorsed by the Government. USD 27 million is required to assist 2.1 million people through livelihoods support and rehabilitation initiatives. This includes: provision of curative and preventive animal health services; provision of fodder and animal supplementary feeding; water trucking and rehabilitation of water points; fire line construction to protect pastures; provision of inputs for the dry season farming and small-scale irrigation devices; livelihood training and start-up kits; and community mobilization and sensitization to promote dialogue between herders and farmers.	4.3 million (Drought, 2009)	(no data)

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 of 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.</p> <p>In drought- and insecurity- affected areas, including Kanem, Bahr el Gazal and Lac regions, 14 000 people currently face Emergency (IPC Phase 4) and 440 000 people face Crisis (IPC Phase 3) food security outcomes. From June–August 2016, it is expected that 47 000 people will face Emergency, 890 000 people will face Crisis and 2.9 million people will face Stressed food security outcome.</p> <p>Given the situation, vulnerable households in the Sahel belt are likely to enter earlier in the lean season, due to a combination of reduced food and cereal stocks and higher prices on local markets. 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 SISAAP (National EWS for Food Security)</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)
Kenya (18)	Flood Animal Losses	The overall food security situation has improved since the end of the lean season in October. The short rains harvest is ongoing and expected to be above-average in the southeast. In several northern pastoral areas, the abundant “short-rains” have led to the seasonal recovery of rangeland and recharged key water points, increasing livestock productivity and improving food security. Cereal production is estimated at well above-average levels, with particularly good prospects for crops in southeastern and coastal areas where the ongoing harvest accounts for about 70 percent of the total annual crop production. Here, abundant rainfall, largely attributed to the strong El Niño phenomenon, despite some localized floods, benefited crops through an even temporal and spatial distribution and a timely onset, which induced farmers to significantly increase the areas planted. Localized floods were reported in parts of northwestern and northeastern pastoral areas and southeastern and coastal marginal agricultural areas.	Government: Developed a multisectoral El Niño Preparedness and Response Plan with specific needs for agriculture, irrigation, livestock and fisheries, and set up an inter-ministerial El Niño Task Force. The plan is budgeted at EUR 143 million. To date, county and national budgets have reportedly committed EUR 112 million, although funds have yet to be released. The Government-led Hunger Safety Net Programme has been designed, with a scalable component to address the additional needs of vulnerable families affected by new crises. It has been activated for over 190 000 additional vulnerable families, as a preventative measure. Through the overall coordination of the Zoonosis Technical Working Group and the Zoonotic Disease Unit a national task force for high-risk animal diseases has been instituted FAO: Providing support to the Government in coordinating food security activities. Rolled out its animal disease contingency plan and has trained people in seven counties to conduct surveillance.	900 000 (Flood, 1997)	11.8 million (1997)

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)
Madagascar (37)	Flood (north); Drought (south)	<p>A food insecurity crisis is affecting 1.9 million people, particularly in the south, due to a third year of 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 destroyed pasture for livestock. Water for both human, animal and agricultural purposes has been scarce. The results of a rapid agriculture and food security assessment exercise carried out in February 2016 estimate that crops and grassland have been negatively affected by drought as a result of El Niño effects. The assessment also estimates that more than 660 000 people of which 80 percent (102 000 households) are in a food insecurity situation as a result. 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.</p>	<p>Government and other partners: 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.</p> <p>FAO: Conducted, jointly with WFP, a Crop and Food Security Assessment mission. 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.</p>	600 000 (Drought, 2002); 20 000 (Flood, 1998)	150 million (Flood, 2003)

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	Food security and malnutrition are likely to deteriorate until the early harvest in June-August. Food access continues to be limited by low livestock prices and limited milk availability due to poor livestock body conditions, limited labour opportunities and the increasing cost of essential goods. For instance, the price of kerosene increased by 200 percent in Obock due to disrupted trade with Yemen. <i>Heys/Dadaa</i> rains have regenerated pasture and increased water availability in parts of the country, but pasture conditions remain poor in southeastern, northwestern and Obock pastoral areas where rains started late and have been below average thus far. Approximately 120 000 people (about 15 percent of the population) are estimated to be severely food insecure.		200 000 (Drought, 2010)	
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 severely deteriorated. One million people in Eritrea are estimated to be food insecure.		(no data)	(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)
Angola (68)	Drought	<p>Crop conditions in the main central producing provinces are generally adequate. However, in southern areas, especially in southeastern parts, which are prone to frequent dry spells, conditions are very poor, particularly as these areas have experienced successive years of reduced harvests and inadequate pasture conditions. Reports indicate livestock deaths and outbreaks of Foot and Mouth Disease, causing restrictions of cattle sales. The situation is more severe in three southern regions, among which the Cunene Region, where about 755 000 people (72 percent of the total population) are affected by drought and there is an estimated loss of 80 percent in production. In the Huila Region, estimated losses average 60 percent and 460 000 people (25 percent of population) are at risk of food insecurity.</p>	<p>Government and other partners: Civil Protection is distributing food and water to affected communities. UN Agencies are implementing various programs in the framework of the National Development Plan 2013 – 2017.</p> <p>FAO: USD 40 million is required to:</p> <ol style="list-style-type: none"> 1) safeguard agriculture-based livelihoods through seed and fertilizer distribution, promotion of conservation agriculture, training in post-harvest techniques and development of storage, school gardens and nutrition education; 2) protect and enhance livestock production through livestock restocking and animal health interventions; 3) Increase water access through rehabilitation of water reservoirs and construction of water points; and 4) Information coordination and analysis, early warning and food security and vulnerability mapping. 	<p>331 700 (Flood, 2009);</p> <p>105 000 (Drought, 1997)</p>	(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)
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. Over the last 3 months, some central parts of South Africa received their lowest October-December rainfall totals in at least 35 years. Seven provinces in South Africa, which constitute the country's main cereal producing regions, have been declared disaster drought areas. Preliminary planting intentions for the 2016 maize crop indicate a 4 percent year-on-year decrease. The first official area-planted estimate was released in January 2016. The Minister of Water and Sanitation said that 2.7 million households were affected by the drought, with 6 500 rural communities facing critical water shortages.	<p>Government and other partners:</p> <p>The Government has set aside ZAR 236 million (approximately USD 14.5 million) to alleviate the impacts of the drought.</p>	(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; Flood in Ayeyarwady and Sagaing regions	Drier than average conditions, since November, have remained with recent storms providing only temporary relief. As the peak of El Niño and the post flood situation are coinciding with the beginning of the dry season, there is a serious risk of water shortages before the next rain season. High temperatures caused by El Niño might delay the summer paddy harvest (Jun-Oct) if water shortages become more widespread. This can lead to rice shortages and an increase in rice prices. Local rice prices were nearly 30 percent higher in January 2016 than the previous year. The rise can partly be attributed to the low harvests after the July-August flooding. Rice prices in 2015 were already over 27 percent higher than in 2014. Wheat and maize were 19.3 percent and 12.8 percent higher, respectively, compared to 2014. Rising water levels of Ayeyarwady and Chindwin rivers pose renewed flood risk after heavy flooding in July/August 2015. Unusually, heavy rains in July and August 2015 caused rivers and creeks to overflow with rainwater, flooding low-lying lands, killing dozens, and displacing thousands at the peak of the rainy season in 2015. Over 1.5 million people have been critically affected by monsoonal floods and landslide.	<p>Government and other partners: Government advised people living near rivers to leave their homes if water levels have risen beyond danger points. The international humanitarian community continues to provide assistance to people affected by the July/August floods.</p> <p>FAO: In the aftermath of Cyclone Komen, a joint FAO-WFP crop and food security assessment mission is underway to determine how to improve farmers' resilience and reduce overall food insecurity.</p>	137 000 (1997)	

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 and maize production at 2.2 million tonnes, a drop of 15 percent.</p> <p>In June 2015, the Government reported that 31 per cent (136 245 hectares) of the transplanted rice areas for the 2015 harvest suffered from serious water shortages, while another 6 percent (34 339 hectares) 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 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.</p> <p>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)

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)
Viet Nam (86)	Drought in the South; Floods	<p>An average rainfall was predicted to be 25 to 50 per cent less than in previous years, especially in the central region during the first half of 2016. Severe droughts in the central, Central Highlands and southern regions in the first months of this year are expected. Further, water shortages are likely to occur in some northern localities, particularly in mountainous and midland areas. In the south central coast, river levels will be 60 per cent less and 20 per cent to 40 per cent lower in the Mekong Delta. As a result, saltwater intrusion in the mouths of the southern rivers will occur earlier and become more severe than in previous years. It is anticipated that 500 000 ha crop (approximately 30 percent total crop of the region) will be affected. Livelihoods of nine provinces in Mekong delta (Long An, Tien Giang, Ben Tre, Tra Vinh, Soc Trang, Bac Lieu, Kien Giang, Ca Mau and Hau Giang) are severely affected.</p> <p>The effects of El Niño will likely terminate by May 2016 in Viet Nam, consequently negatively affecting the start of the Autumn crop season (May-August).</p>	<p>Government and other partners: 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 the State of Emergency in three southern provinces. A flood disaster simulation exercise will be carried out in April for the UNCT Vietnam with assistance from the regional OCHA Office in Bangkok (USD 10 000)</p> <p>FAO: The FAO Strategic Programme for Resilience committed USD 32 000 for a mission (currently underway) to assist the MARD 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 the relevant available tools from FAO for the country and the region. Emergency procurement of seeds and tools is being planned (specs prepared, identification of suppliers and available stocks, etc.) in preparation for an official assistance request by the Government.</p>	3 million (Drought, 1997)	407 million (Drought, 1997)

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	El Niño climatic conditions are aggravating the chronic drought situation, which is affecting different areas of the country. 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.	FAO: Focusing its intervention in the most drought-affected departments, such as Guajira. Activities include protecting livestock assets, constituting seed banks, recovering farming and livestock assets of indigenous communities.	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	
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.	Government and other partners: Authorities assisting with beds, mattresses, hygiene kits and food. A strong response mechanism has been put in place. 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. FAO: FAO is planning the establishment of South-South Cooperation on El Niño response.	236 000 (Flood, 2009); 1.8 million (Cold Wave, 2003)	
Ecuador (67)	Flood Fisheries	Above-average rainfall is anticipated in southwest Ecuador in January–May 2016		54 000 (Flood, 2002)	271 million (1997/1998)
Bolivia (89)	Drought in highlands Floods in centre and east	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 hectares, mainly reflecting low market prices. A total of 31 000 hectares of crops are affected and another 26 000 are at risk due to hail, rain and droughts. The worst affected departments are Potosi, Oruro, Chuquisaca, Cochabamba, La Paz and Santa Cruz, with 31 000 families affected by losses in agricultural production. About 854 000 animals, especially llamas and sheep, have been lost.	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.	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	
Dominican Republic (93)	Drought	1.6 million people have been affected by drought in the Dominican Republic. In some areas, rain deficits have led to a 60 percent decrease in crop production as well as livestock deaths.	FAO: In October-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.	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 is in the process of allocating USD 500 000 from TCP emergency funds to assist affected farmers in the Presidente Hayes department.	200 000 (Drought, 2009)	(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
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–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 is 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 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 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 TCP Emergency funds for immediate assistance to restore agricultural productivity. Fields will be restored and tools distributed.</p>	

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