



Food and Agriculture Organization
of the United Nations

2015–2016 El Niño

Early action and response for
agriculture, food security and nutrition

Report

WORKING DRAFT (14 December 2015)

Update #4



What is El Niño?

El Niño is the warming of sea surface temperature in the tropical Pacific, which occurs roughly every 3 to 7 years, lasting from 6 to 24 months. While the main threat to food production is reduced rainfall and drought in some regions, El Niño can also cause heavy rains and flooding in other regions. Climate change can make its impact more severe. Climatologists are predicting that the 2015–2016 El Niño event is likely to be stronger than that of 1997–1998 – currently the worst on record – and may persist until second quarter of 2016.

Background and purpose

The Food and Agriculture Organization of the United Nations (FAO) has as its Strategic Objective 5 to “Increase the resilience of livelihoods to threats and crises”¹. In support of its national counterparts, FAO aims to address the current and future needs of vulnerable people affected by the 2015–2016 El Niño event. It is widely recognized that by striking before a crisis has escalated into an emergency, disaster losses can be reduced and emergency response costs significantly decreased. Early actions strengthen the resilience of at-risk populations, mitigate the impact of disasters and help communities, governments and national and international humanitarian agencies to respond more effectively and efficiently.

Sea surface temperatures in the El Niño region 3.4² have continued to increase, reaching a record weekly average of 3 °C in the second week of November. However, while most models predict that this El Niño will likely stay above the + 1.5 °C “strong” threshold, it is difficult to assess if the current event will surpass the effects of the 1997–1998 El Niño, as it is a slow onset phenomenon and each occurrence can differ from the others. Even if this El Niño will not be as strong as that of 1997–1998, it will be one of the strongest registered, which is already impacting several regions.

The increase in climate-related disasters from an El Niño event is particularly important for FAO’s mandate. A recent ten-year analysis led by its Climate, Energy and Tenure Division showed that 25 percent of all damage caused during natural disasters is in the agriculture sector. In drought alone, agriculture is the single most affected sector, absorbing around 84 percent of all the economic impact (The Impact on Natural Hazards and Disasters on Agriculture, FAO 2015). This report provides a global analysis of the current and expected evolution of El Niño-related disasters and its 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 FAO. 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 phenomenon, the report will be subject to regular updates.

¹ www.fao.org/about/what-we-do/so5/en/

² Various models are taken into account for monitoring, and eventually declaring, the potential occurrence of El Niño and La Niña events. Among the many, one of the most relevant systems is managed by the U.S National Oceanographic and Atmospheric Administration, which through buoys monitors key data (sea surface and sub-surface temperatures, atmospheric conditions, currents and winds) across the equatorial Pacific Ocean. This large stretch of Ocean waters is subdivided into different regions, and the one named Niño 3.4 provides some of the most important information and accurate predictions of the likely consequences of El Niño and La Niña events.

Country profiles

For each country, based on available and up-to-date information, 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).

♦ **Outlook for the El Niño event** within the country. If the El Niño has already begun having a significant effect on the country, an update on current status is given. (*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 early actions and 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.

Based on this evidence, the countries described in this report are organized into two groups: 1) High priority countries and 2) other countries that are affected, or at risk of being affected, by El Niño.

Regional highlights

Africa

- Ethiopia – an estimated 15 million people will need food assistance by March 2016, up from 8.2 million as of November 2015.
- Malawi – the price of maize is 90 percent higher than a year ago and 47 percent of children under five years are malnourished.
- Zimbabwe – 16 percent of the rural population is likely to be food insecure by early 2016 – nearly 1.5 million people.
- Somalia – with floods already affecting agricultural production, FAO, the Government and NGOs are improving river defences and protecting seeds through plastic bags distribution.

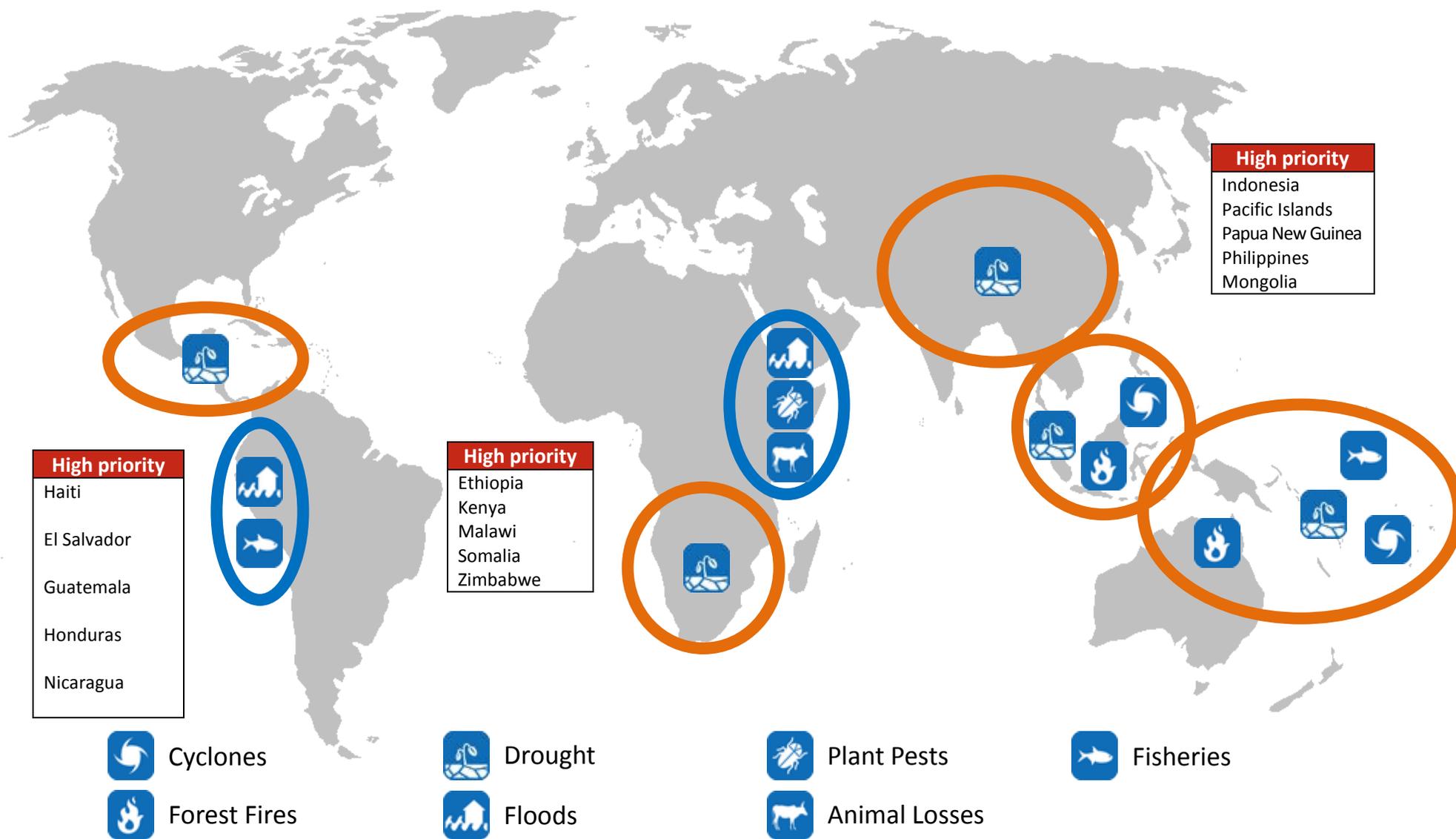
Latin America and the Caribbean

- Guatemala – up to 80 percent of crops have been lost in the Dry Corridor, affecting 4.2 million people.
- Haiti – the spring harvest – accounting for half of annual production - is 40 percent lower.
- USD 6.7 million still needed to increase the resilience of vulnerable rural populations in Central America's Dry Corridor (El Salvador, Guatemala, Honduras and Nicaragua) in order to address disaster risk and crises that affect food security and nutrition.
- FAO's regional assistance programme to strengthen resilience to disaster risk is targeting 50 000 vulnerable small scale farming households.

Asia and the Pacific

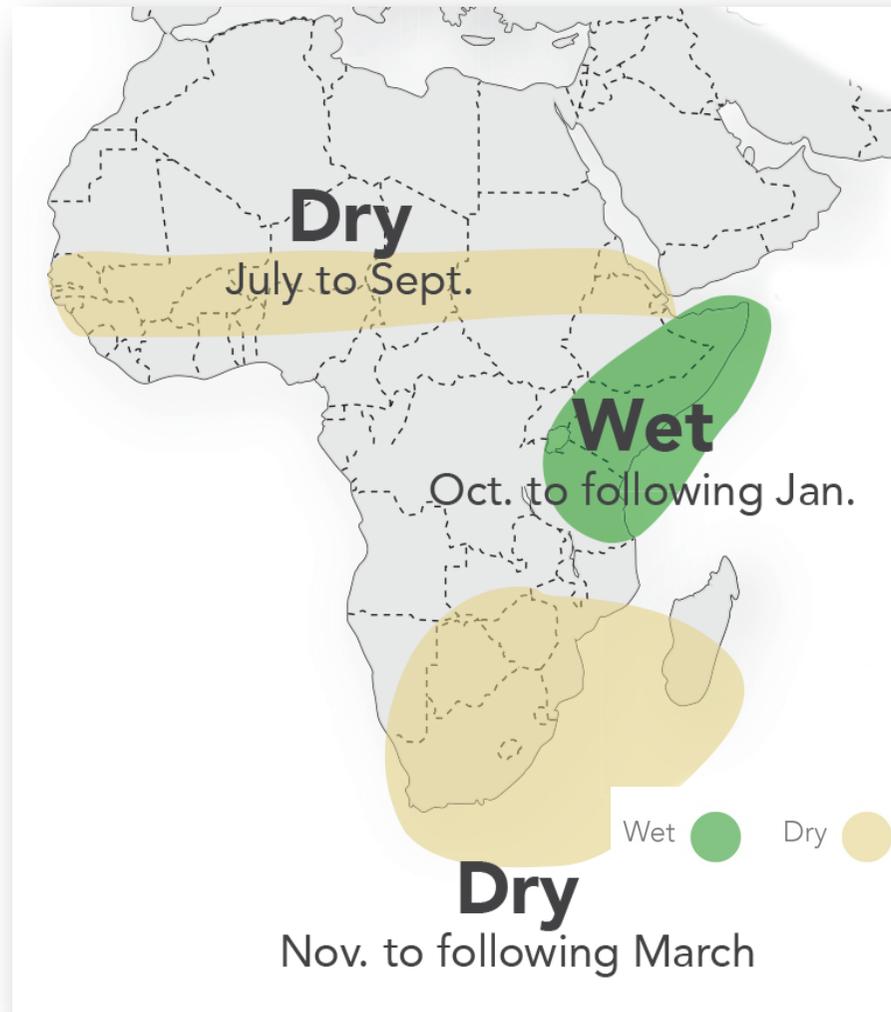
- Indonesia – 43 million people are affected by haze from forest fires and rice prices are at a record high.
- Papua New Guinea – a third of the population – 2.4 million people – are affected by drought.
- Philippines – Typhoon Koppu caused USD 180 million of agricultural damage.
- Fiji – rainfall on one island was just 9 mm in October – 10 percent of the usual amount.

2015–2016 El Niño FAO priority countries



El Niño regional forecast for Africa

El Niño conditions in the tropical Pacific are known to shift rainfall patterns in many parts of the world. Although they vary from one El Niño to the next, the strongest shifts remain fairly consistent in the regions and seasons shown here.



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

Outlook

- ◆ FAO-managed Somalia Water and Land Information Network (SWALIM) highlights the risk of above average rainfall and associated floods along the Shebelle and Juba Rivers for last quarter of 2015. During the last week of October, more than 90 000 people have been affected by floods and 42 000 people displaced.
- ◆ ECHO estimates 3.2 million people are food insecure. Up to 900 000 are estimated to be affected by El Nino in Puntland, Southern and Central Somalia.
- ◆ Potential damage to “deyr” crops to be harvested early next year. Outbreaks of prevalent animal disease and desert locust numbers could increase and, if unchecked, hopper bands and adult swarms may eventually form.

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 early action and response

Government and other partners

- El Niño contingency plan for preparedness and immediate response finalized.

FAO

- Implementing an El Niño Preparedness and Early Response Plan. The Department for International Development (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 2 736 households, which focused on closing 87 river embankments (total volume of 30 470 cubic meters)
- Together with Somaliland’s Ministry of Agriculture, strengthened monitoring in the winter (November-March) breeding areas of desert locusts and will provide training in collaboration with the Desert Locust Control Organization for Eastern Africa using FAO-Somalia funds.

Funding requirements

USD 57.6 million required to fully implement the FAO El Niño Plan, of which 2.6 million already mobilized.



Ethiopia

INFORM Rank: 15



Drought in northeast



Floods in south



Animal Losses

Outlook

- ◆ Strong drought (very severe in Northern Pastoral Zone, severe in Eastern Highlands Agricultural Zone) condition emerged due to the combination of failed spring rains and El Niño induced failed summer rains. Wheat rust could spread in the West.
- ◆ Strong rains forecast for the bega season (Oct. 2015 to Jan. 2016) in the Somali, SNNPR and Southern Oromia regions might lead to a total 210,620 people affected
- ◆ Poor grazing resources in southern Afar and northern Somali regions due to erratic July to September "karan/karma" rains. High livestock mortality rates, worsening animal body conditions and declining milk productivity.
- ◆ The Ethiopia Humanitarian Country Team (HCT) projections for 2015–2016 include a rise in the number of people needing food assistance from 10.2 million (December 2015) to 15 million people, 100 000 new cases of children with severe acute malnutrition and 450 000 livestock deaths.

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 early action and response

Government and other partners

- Government prepared an EL Niño Disaster Preparedness and Response Road Map, allocated USD 192 million and 220 000 tonnes of food.
- The Ethiopia HCT prepared a disaster appeal in September, identifying USD 237 million to preposition supplies for the first quarter of 2016.
- Government and humanitarian partners prepared the 2015 National Flood Contingency Plan for the bega season, which highlights prone areas, key interventions and partners.

FAO

- Established, under the HCT, that USD 30.5 million was needed for crop support, animal vaccination, fodder production and restocking to support 1 million farmers and 1.5 million animals.
- Supported the Agricultural Task Force in developing the Ethiopia El Niño Response Plan (ENRP 2015-16)
- Raised USD 1 million through the underfunded window of the Central Emergency Response Fund (CERF) of the United Nations to support the livelihoods of pastoralist, agropastoralists and smallholders affected by the drought in Afar and elsewhere.
- Reprogrammed USD 700 000 from different projects and released USD 500 000 in SFERA funding for immediate support to the livestock sector (emergency feed);
- Surging additional FAO staff to scale up capacity of country office.

Funding requirements

USD 30.5 million is needed to support seed, locust and wheat rust surveys and controls as well as livestock related disaster risk management interventions. Of this, USD 2.6 million has been secured.



Kenya

INFORM Rank: 17



Floods



Animal Losses

Outlook

- ◆ Reduced second season crop production and deteriorating pastures have resulted in severe food insecurity affecting around 1.1 million people in coastal and northeastern counties
- ◆ Above-average rainfall is expected, with the possibility of riverine floods, damage to crops and infrastructure and the risk of wheat rust spreading.

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	900 000 (1997)	11.8 million (1997)

Kenya early action and response

Government and other partners

- Government developed a multi-sectoral 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, but funds have yet to be released.
- Government-led Hunger Safety Net Programme (HSNP) 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 preventive measure.
- Through the overall coordination of the Zoonosis Technical Working Group (ZTWG) and the Zoonotic Disease Unit (ZDU) a national task force for high-risk animal diseases has been instituted through the collaboration of the veterinary and human health sectors in Kenya.

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.

Funding requirements

Currently being assessed.



Zimbabwe

INFORM Rank: 32



Drought



Animal Losses

Outlook

- ◆ Harvest estimates for 2015 are 50 percent below the previous year, due to reduced rainfall in 2014.
- ◆ Drier than average conditions are expected to continue, increasing the possibility of reduced maize production in 2016.
- ◆ The rainfall outlook for October to December 2015 predicts below normal rainfall for the Mashonaland Provinces, Midlands, Manicaland and Harare, while the rest of the country expects normal to below-normal rainfall. It is forecast that in January–March 2016 rainfall will be normal to above-normal in the north and northeast.
- ◆ Rural food insecurity was estimated by the Zimbabwe VAC as 10 percent of the rural population from October to December 2015.
- ◆ The committee’s 2015 evaluation indicates that 16 percent of the rural population – 1.49 million people – will be food insecure during the peak hunger period of January to March 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	1.6 million (2010)	(No data)

Zimbabwe early action and response

Government and other partners

- Government has given advice to farmers on how to mitigate the effects of El Niño, such as the types and quantities of crops to plant.
- A Food Insecurity Response Plan was developed by the Zimbabwe Humanitarian Country Team in late September 2015, which aims to cover the emergency needs of an estimated 1.5 million food-insecure people in 52 affected districts. The response plan seeks USD 132.2 million, for which CERF has allocated USD 8.1 million.
- The UNCT 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

- FAO has prepared a drought mitigation programme to address the combined impact of the drought earlier in the year with the anticipated effects of El Niño. USD 2.1 million, out of USD 32.5 million, has been raised from CERF. The following activities have been proposed for this programme:
 - Subsidized drought-tolerant seeds (small grains and legumes)
 - Subsidized survival stock feed
 - Rehabilitation of 280 water points
 - Foot-and-mouth disease and anthrax vaccination
 - Strengthened early warning systems

Funding requirements

Current funding gap of USD 30.4 million for FAO drought mitigation programme.



Malawi

INFORM Rank: 74



Drought in south

Outlook

- ◆ Unfavorable weather in the first quarter of 2015 caused a 30 percent reduced harvest in June 2015 compared to the 2014 figure.
- ◆ 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.
- ◆ 2.8 million people are predicted to be food insecure when the lean season is at its peak from January to March 2016. Over 47 percent of children under the age of 5 are currently malnourished.
- ◆ Maize prices continued to rise significantly in October. The national average price in October was more than 90 percent above its year-earlier value and only 4 percent below the record level of January last 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 early action and response

Government and other partners

- Government declared a state of emergency in September 2015 and will import 56 000 metric tonnes of maize to stabilize local markets.
- Technical assistance is being provided through on-job mentorship to health workers. This covers community-based management of acute malnutrition and rapid SMS reporting on nutrition growth monitoring at health facilities in food insecure districts.
- HCT supported 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

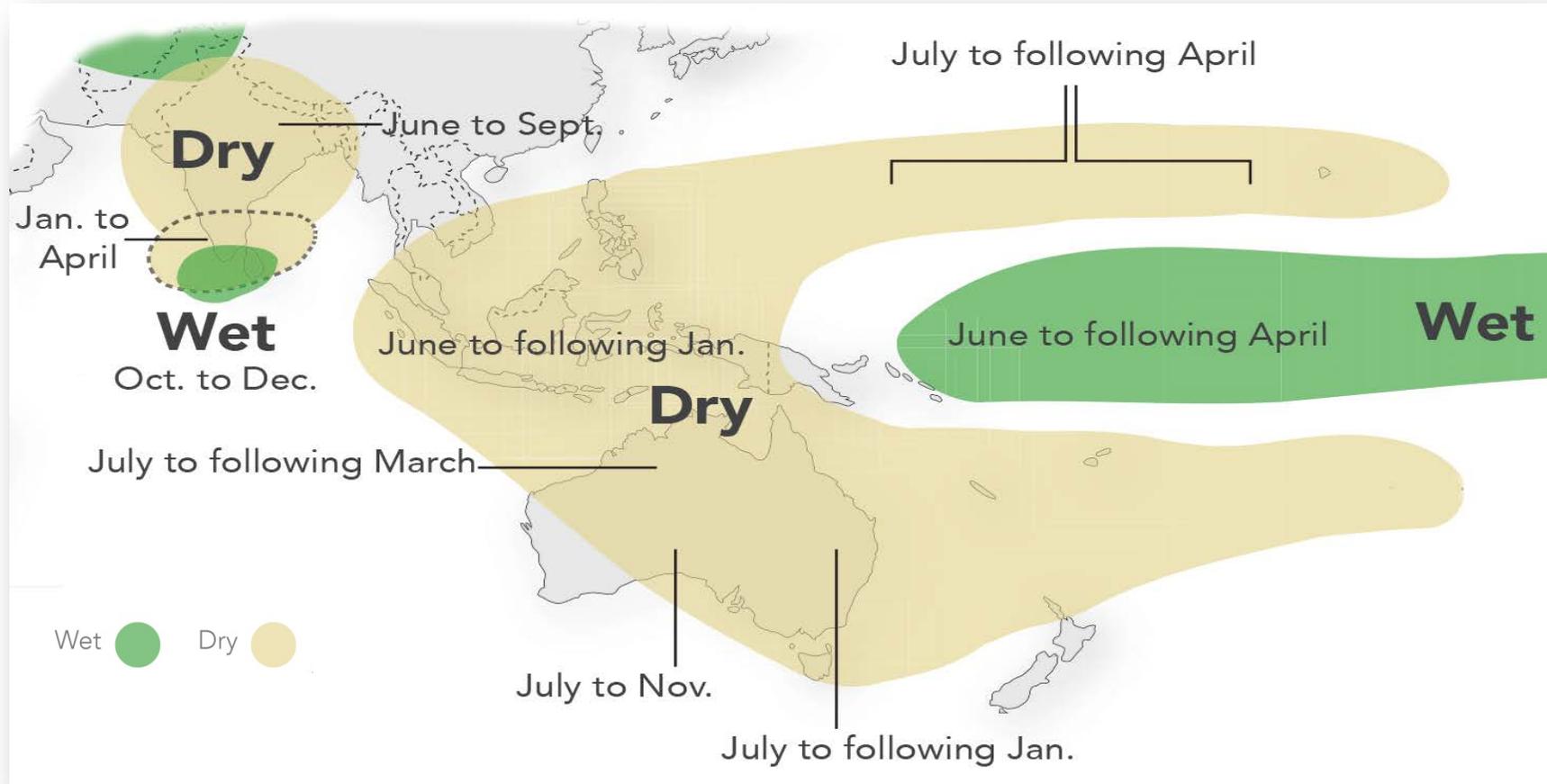
- Co-leads the Agriculture Cluster, which supported the Ministry of Agriculture and other stakeholders in designing the Agriculture Response Plan for El Niño. The total value of the agriculture component in the national response plan is USD 44 million.
- Mobilized nearly USD 2 million from CERF for urgent assistance to vulnerable farmers for the next planting season which starts by mid-November.
- Particular emphasis has been given to provide early maturing varieties, drought resistant cereals and irrigation support to around 42 000 households in the six districts more prone to erratic rainfall and dry spells.

Funding requirements

The Agriculture Response Plan is still widely underfunded. At least USD 18 million is required to complete the most urgent activities such as seeds, irrigation and livestock.

El Niño regional forecast for Asia and the Pacific

El Niño conditions in the tropical Pacific are known to shift rainfall patterns in many parts of the world. Although they vary from one El Niño to the next, the strongest shifts remain fairly consistent in the regions and seasons shown here.



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Drought



Cyclone



Fisheries

Outlook

- ◆ 85 percent of the country could be affected by dry spells and drought until the first quarter of 2016.
- ◆ Warmer than normal air temperatures likely to be felt.
- ◆ The Department of Agriculture reported in August 2015 that 144 083 ha of farms are affected, involving 65 855 farmers; 218 379 metric tonnes of crops lost, worth an estimated USD 70.8 million.
- ◆ Typhoon Koppu, which made landfall on 18 October, is estimated to have resulted approximately USD 180 million in agricultural damage.

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 early action and response

Government and other partners

- Government is preparing the Roadmap to Address the Impact of El Niño (RAIN). 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

- Assisting the DA in preparing a disaster risk reduction strategy for agriculture and has supported regional field offices in mitigation and rehabilitation planning for El Niño.
- Conducted regional climate fora for agriculture on El Niño together with the DA and Astronomical Services Administration (DOST-PAGASA), the national meteorological agency and is providing the United Nations Country and Humanitarian Teams with updates on the projected impact.
- Supported a needs assessment and subsequent emergency interventions in El Niño affected communities in Maguindanao and North Cotabato provinces in the south
- Supporting climate information dissemination through activities such as farmer field days and training agricultural extension workers in enhanced climate risk management.
- Supported Government in Rapid Damage and Needs Assessment (RDNA) and response planning to provide farmers affected by Typhoon Koppu and El Niño with certified rice seed and fertilizer for planting in December 2015.

Funding requirements

FAO needs USD 3 million to implement field-based activities, restoring the livelihoods of affected farming and fishing communities. An additional USD 2 million is required to strengthen 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.



Papua New Guinea

INFORM Rank: 36



Drought



Cold wave

Outlook

- ◆ An estimated 2.4 million people are affected by an El Niño-induced drought, frost and forest fires in all four regions of the country. The Prime Minister's office says 1.3 million are classed as being in Category 4 (out of 5), due to drought.
- ◆ 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.
- ◆ Areas that rely heavily on watercourses to transport cash crops to markets are also affected by reduced water levels.
- ◆ Insect and animal infestation of crops 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 (1997–1998)	USD 21 million for food aid (1997–1998)

Papua New Guinea early action and response

Government and other partners

- Government allocated USD 8.5 million to 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 proposal put forward to donors.

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.
- Assisting 80 000 subsistence farming families in the four worst-affected provinces Enga, Chimbu, Southern Highlands and Morobe through: dissemination of drought messages to affected farmers, including farmer field demonstrations; provision of drought-tolerant crops, early maturing varieties; and provision of smart irrigation support material (e.g. drip-irrigation systems).
- Deployed an assessment mission to develop a preparedness and response strategy for the food security sector, jointly with the WFP.
- Developed an El Niño Early Action and Response Plan for which USD 300 000 has been committed from internal sources.
- Increasing FAO Staff in country for food security coordination

Funding requirements

USD 4.9 million needed to assist 560 000 subsistence farmers.

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



Drought



Cyclone



Fisheries

Outlook

- ◆ Drought is forecast for northern and western Pacific threatening the livelihoods and well-being of 4.7 million people across the Pacific.
- ◆ Reduced rainfall in Fiji, Tonga, the Solomon Islands and others affecting crops and drinking water.
- ◆ In Fiji, during October, Ono Island in southern Lau reported just nine millimeters of rain, or about 10 percent of the average for October. Sugar cane crop is 25 percent down.
- ◆ 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

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 early action and response

Government and other partners

- In Tonga, emergency water supplies distributed to the outer islands and water desalination services made available.
- In Fiji, 67 000 people are currently targeted with government water deliveries in villages and schools, especially on the outer islands. Devastation caused by a category five cyclones being compounded in Fiji by drought. Government is 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

FAO

- Sub-regional office for Pacific is already implementing the "El Niño Drought Preparation and Monitoring in Micronesia and Melanesia", for which 400 000 USD have been received from OFDA. It focuses on assisting governments to mitigate risks to the food and nutrition security of vulnerable households.
- FAO, through a Belgian Trust Fund project on "Emergency Support to Re-establish Agricultural Production in Communities Affected by Cyclone Pam", is training farmers in Vanuatu on food preservation methods.
- FAO, in partnership with "Disaster Preparedness Programme of the European Commission's Humanitarian Aid department", is targeting vulnerable communities in Fiji, Tonga and Vanuatu to enhance national and local



Indonesia

INFORM Rank: 38



Drought



Wildfire

Outlook

- ◆ Most of the country has been affected by drier than normal conditions between July and October.
- ◆ Current dry weather also triggered forest and peat land fires over localized areas of Sumatra and Kalimantan islands, with official reports indicating some 43 million people affected by haze.
- ◆ Fires have damaged between 2.3 to 2.8 million ha of forest and agricultural land.
- ◆ The onset of the main rainy season, which normally begins from October to December, is expected to be delayed by up to 6 weeks, with a negative impact on planting and production.
- ◆ Record high prices of main staple - rice - are expected to weigh heavily on food access and stress the food security situation of the most vulnerable population.

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

Indonesia early action

Government and other partners

- A United Nations Country Team Focus Group for El Niño, co-led by FAO and WFP, has been established. Under the leadership of this group impacts of current situation have been monitored and assessed and response plans being developed.
- The Government has put in place measures to mitigate the impact of the current dry weather, through the rehabilitation of irrigation channels, building of new reservoirs and wells, and distribution of water pumps to affected farmers.
- The Government has allocated USD 258 million to improve rice state reserves and stabilize the prices of staple foods, amid worries over the impact of the ongoing drought on food production.

FAO

- Three food security analysts have been deployed from early November onwards to support food security assessments, interagency collaboration and the development of an El Niño Early Action and Response Plan. This will target food security monitoring and analysis, scale-up of drought resilient agriculture cultivation practices, climate information to support farmer decision making and preparedness and prevention of forest and peatland fires.
- FAO will collaborate with the Ministry of Agriculture, the Indonesian National Institute of Aeronautics and Space and WFP in the production of a monthly Food Security Monitoring Bulletin

Funding requirements

Currently being assessed.



Mongolia

INFORM Rank: 118



Cold Wave

Outlook

- ◆ The combined impact of drought and a likely dzud (cold winter), is putting the livelihoods of vulnerable herder households at severe risk.
- ◆ Wheat harvest is 40 percent down and the drought reduced grazing pasture. The livestock population is 70 million, but there's only pasture for 60 percent of it. Even without the predicted cold weather, animals are not likely to have sufficient fat stores to last the winter.
- ◆ Oversaturation of livestock and livestock products in the national market has caused price decreases of 40-60 percent exacerbating household debt.

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); 10 million head of livestock lost (2009–2010)

Mongolia early action

Government and other partners

- 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.
- The UN HCT met on the dzud to exchange assessments and updates from government ministries and FAO.

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.

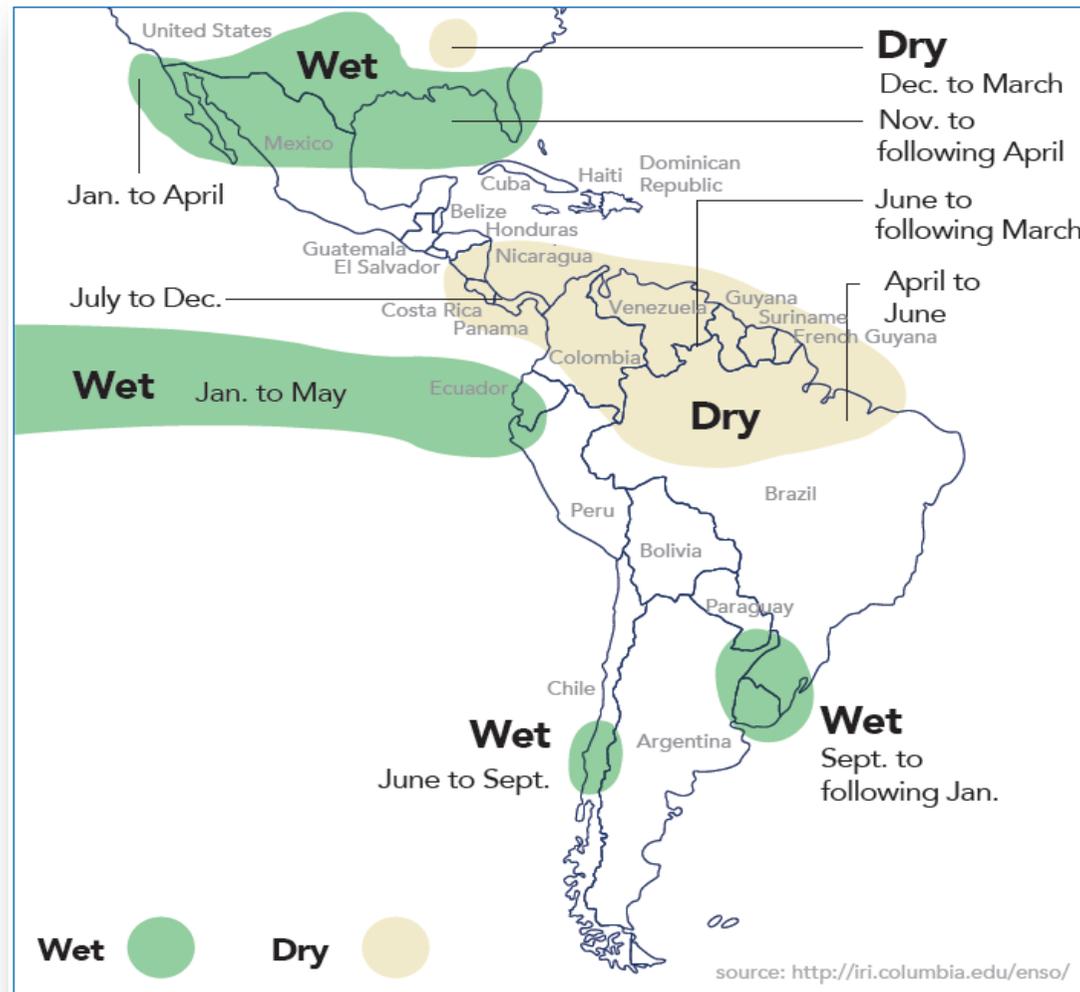
Funding requirements

The cost of partial commercial destocking to preserve the livelihoods of the most vulnerable households (approximately 6 500 families) is estimated just over USD 8 million. USD 200 000 from SFERA has been committed.

LATIN AMERICA AND THE CARIBBEAN

El Niño regional forecast for Latin America and the Caribbean

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Haiti

INFORM Rank: 19



Drought

Outlook

- ◆ Haiti is forecast to continue experiencing extremely warm and dry conditions through to May 2016.
- ◆ Poor households in South, South-Est, Nord-Ouest, Nord-West and Artibonite are expected to be affected by food insecurity due to the combined effect of food prices, erratic rains, poor autumn harvest prospects and agricultural investment.
- ◆ Drought conditions have resulted in a 50 percent decrease of the spring harvest seasons, which generally covers half of total agricultural production.
- ◆ The combination of the present situation, with previous poor harvest season, is impacting seeds availability for farmers. 37 Communes have been reported in phase 3 of IPC (estimate for the period October- December 2015).
- ◆ The massive return of thousands of Haitians expelled from the Dominican Republic has worsened 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 early action and response

Government and other partners

- Early warning has been led by the National Committee for Food Security (CNSA), Ministry of Agriculture, FEWSNET, FAO/GIEWS. Initiatives are in place for the reinforcement of monitoring and surveillance mechanisms and to improve coordination among stakeholders.
- The government and humanitarian communities, with the involvement of technical agencies (national and departmental), are targeting rural communities, focusing on food and water distribution, rehabilitation of water supply systems, 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 Nino.

FAO

- FAO and WFP Haiti agreed that a CFSAM is needed and are in the process of consulting the Ministry of Agriculture and CNSA (national food security coordination).
- Seed and tools distribution going on in the most drought affected Departments (South East and North West) through the UN's CERF system.
- Contribution 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, integrated production models.

Funding requirements

The CNSA estimates that 430 000 people are in phase 3 of IPC and USD 36.1 million would be required for their assistance (FCW, food vouchers,



Drought

Outlook

- ◆ El Niño has caused decreased rainfall and drought in most parts of El Salvador.
- ◆ 192 000 Households are facing severe acute malnutrition.
- ◆ 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). 60 percent of the maize crop was destroyed by irregular rainfall earlier this year. Drought has affected 161 181 farmers - mostly maize producers.
- ◆ The current drought’s impact on the economy has increased with respect to 2014 drought to approximately USD 100 million. 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 with forecasts indicating that they will continue to fall.

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 early action and response

Government and other partners

- 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.
- It also distributed drought and rust resistant coffee plants and trained producers on the use of irrigation techniques to cope with drought

FAO

- Supporting the Ministry of Agriculture in its long-term strategy to adapt local agriculture to the effects of climate change. Support is focusing on local capacity development, agro-climate risk management and support for research, innovation and transfer of new technology for climate change adaptation. Help is also being given for sustainable management of local basins and land tenure, outreach and education and resource mobilization for adaptation, mitigation and resilience to climate change.
- USD 500 000 though SFERA has been committed to the Corridor Seco to promote actions aimed at reducing vulnerability and to increase livelihoods resilience in the agriculture, forestry, livestock and fisheries sectors.

Funding requirements

USD 6.6 million is required to assist affected subsistence farmers through distribution of seeds, inputs, irrigation systems and water collection-storage systems.



Drought

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 (SESAN), around 175 387 families have reported between 50-100 percent loss of maize and bean harvests in the dry corridor.
- ◆ In the western highlands, households affected by coffee rust and below-average rainfall are expected to face Crisis in terms of food security outcomes (IPC Phase 3) until November. In the east, affected households are expected to be Stressed (IPC Phase 2) from October through December.
- ◆ Total financial losses for maize are reported by MAGA in the amount of USD 30.8 million for around 90 000 TM. For black beans, total losses are reported in the amount of USD 13.7 million for around 12 500 TM.

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 early action and 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 110 000 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 100 000 families in Guatemala

Funding requirements

Overall, USD 38 million are required to respond to humanitarian needs, out of which USD 28.6 million for initiatives related to food security, livelihoods rehabilitation and agriculture.



Honduras

INFORM Rank: 77



Drought

Outlook

- ◆ Recent estimates indicate that 1 350 000 people are affected and in need of immediate humanitarian assistance.
- ◆ El Niño conditions forecast to last until the spring of 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 early action and response

Government and other partners

- 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 an emergency response programme and designing a new project to support affected farmers.

Funding requirements

In total, USD 45.8 million are required for humanitarian assistance, out of which FAO requires USD 3.4 million for immediate livelihoods restoration activities.



Drought

Outlook

- ◆ Wholesale prices of white maize are 40 percent higher than last year. Poor households in northern Chinandega, western Estelí, northwestern Nueva Segovia, western Madriz, and Boaco and Carazo departments are expected to face Crisis (IPC Phase 3) in regard to food security outcomes by September. Poor households, including subsistence farmers, day labourers, and small coffee producers in northern and central areas are expected to face Stressed (IPC Phase 2) food security outcomes between September and November.
- ◆ El Niño conditions are forecast to last until at least March 2016 and it 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 early action and 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.

Funding requirements

Currently being assessed.

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)
South Sudan (4)	Floods (south) Animal disease (south)	The latest IPC identified 3.9 million people in crisis and emergency phases of food insecurity. El Niño could aggravate this further. The east has already been affected by poor rain in July and August. In the last quarter of 2015, the southern part of the country is expected to experience above average cumulative rainfall.			
Sudan (5)	Drought; Animal disease	Areas where rain fed agriculture is practiced have had, up to August 2015, 25-80 percent less rainfall than usual. Planting delays of 4-8 weeks could have an impact on the wheat crop. Increased risk (30 – 50 percent) of crop losses as well as low harvest with IPC indicating 3.9 million people food insecure and malnourished. Areas at risk of poor harvests and livestock losses mostly in North, South and Central Darfur and Kassala. While this scenario is part of inter-annual climate variability, El Niño has contributed to reduced rainfall. FEWSNET forecasts above-average rains from October to December 2015, which would improve winter farming and pasture opportunities, but would also increase the risk of flooding.	Government and other partners: Closely monitoring the situation; preparing to conduct a post-harvest assessment. FAO: Advocating for early interventions to support families facing high risk of crop losses to grow vegetables and legumes over the winter; seeking support for livestock vaccination, treatment and feeding services; supporting Government monitoring through mid-season and post-harvest assessments, as well as the CFSAM in December 2015. USD 6 million is required to assist 125 000 rural families in affected localities.	4.3 million (Drought, 2009)	(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)
Uganda (14)	Flood	Above to well above-average rain is likely countrywide, increasing the likelihood of floods and landslides, which, which may have a localized but severe impact on food security (Currently, about 295 000 people in Karamoja Region). More than 100 000 people are at risk of landslides in the Mt Elgon and Rwenzori sub-regions. An additional 350 000 people are expected to experience negative effects of El Niño.	<p>Government and other partners: Issued a National El Niño Preparedness and Contingency Plan, covering 470 000 people, and budgeted at EUR 12.2 million; plans to relocate 100 000 people currently living in flood prone areas</p> <p>FAO: Contributed to the government’s El Niño Response Plan; developed a contingency plan for Karamoja to support government monitoring, rapid risk assessments, mapping vulnerable communities and fine tuning forecasting; strengthening communication networks and flood warnings; mitigation measures through CFW or crop protection and preventive treatment and migration of livestock. Developing a programme to support South-Sudanese refugees from the effects of El Niño, USD 1.5 million focused on seed provision, home gardening, livelihoods diversification and livestock disease surveillance.</p>	154 000 (Flood, 1997)	1 million (Flood, 1997)
Mozambique (22)	Flood	Normal to below-normal rains are forecast for southern and central Mozambique and normal to above-normal over the north-east between October 2015 and January 2016. Normal to above-normal rainfall is forecast over the northern and central areas between January and February 2016. The northwest has suffered unusually extensive flooding earlier in the year.	<p>Government and other partners: Mozambique has a Contingency Plan in place for 2015/2016 which includes El Niño especially in the rain and cyclone season.</p>	400 000 (Flood, 1997); 23 000 (Cyclone, 2003)	3 million (Cyclone, 2009)

EAST AND SOUTHERN AFRICA (cont.)					
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)
Burundi (26)	Floods	Burundi faces elevated risks of flooding by the end of this year according to UNICEF. Heavy rains in October induced by El Niño affected 11 of Burundi's 18 provinces. In Muhuta, Bujumbura Rural province, over 350 households were left without shelter after landslides and the Burundi Red Cross estimates that up to 250 000 people could be affected by flooding and related epidemics over the rainy season.		8 000 (Flood, 2000)	
United Republic of Tanzania (27)	Flood	Increased rainfall expected to be most beneficial in northern Mount Kilimanjaro, Arusha, Lake Zone and eastern Tanzania. A good harvest is expected, with a bumper one in the northeastern highlands as 90 percent of food is grown in this <i>Vuli</i> season. Crop failure and animal disease are expected in the lowlands due to flooding.	Government and other partners: An Inter-agency Contingency Plan is in place for July 2015 to June 2016, including floods, drought, epidemics, population influx from neighboring countries and electoral unrest.	50 000 (Flood, 2009)	
Madagascar (42)	Flood (north); Drought (south)	A food insecurity crisis is affecting 1.89 million people, particularly in the south, due to a third year of drought and a locust plague. 450 000 people are severely food insecure. Above-normal rains are expected in the centre and north (with the risk of flooding) and normal to below-normal in the south, exacerbating the drought. The 2015 rice crop is estimated at 3.7 million tonnes (in paddy terms) - a decline of 6 %. Estimates for maize is 330 000 tonnes and cassava 2.7 million tonnes – both 10 percent down.	FAO: Conducted, jointly with WFP, a Crop and Food Security Assessment mission	600 000 (Drought, 2002); 20 000 (Flood, 1998)	150 million (Flood, 2003)

EAST AND SOUTHERN AFRICA (cont.)					
Country (INFORM rank)	Potential disaster(s)	Outlook/current situation	Early action and response	Highest impacts recorded for a single disaster event in 1997–1998, 2002–2003 or 2009–2010	
				Total people affected	Total damage (USD)
Eritrea (53)	Drought	There's a severe drought in pastoral and coastal pastoral areas. Rainfall in June and July 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 did not offset this and grazing severely deteriorated.			
Djibouti (58)	Drought	Poor rains have caused inadequate pasture and acute food insecurity is anticipated to continue for poor households in the Southeastern and Obock pastoral areas throughout 2015. Approximately 120 000 people (about 15 percent of the population) are estimated to be severely food insecure. Two-thirds are receiving humanitarian assistance. ECHO estimates the number affected by crisis to increase to 150 000, out of a total population of 835 000.		200 000 (Drought, 2010)	
Lesotho (81)	Drought	The rainy season – which usually starts in August or September – hasn't yet started and average- to below-average rainfall is anticipated countrywide from October to March 2016. A drought is deemed likely with resulting food insecurity.	Government and other partners: Government activated the Drought Preparedness and Mitigation Plan, estimating funding needs at USD 18 109 546 for implementation of activities in 2015/2016.	500 000 (Drought, 2002)	

ASIA AND THE PACIFIC					
Country (INFORM rank)	Potential disaster(s)	Outlook/current situation	Early action and response	Highest impacts recorded for a single disaster event in 1997–1998, 2002–2003 or 2009–2010	
				Total people affected	Total damage (USD)
Myanmar (10)	Drought; Flood in Ayeyarwady and Sagaing regions	Drier than average conditions have remained with recent storms providing only temporary relief. Rising water levels of Ayeyarwady and Chindwin rivers pose renewed flood risk after heavy flooding in July/August. Prices of emata rice, the most consumed variety, in October were almost 40 percent higher than a year earlier - near-record levels. Despite a 6 percent fall in October with the beginning of the 2015 main season harvest, prices remained well above their year-earlier levels due to the floods.	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.	137 000 (1997)	
Pakistan (16)	Flood Drought in south east	Increase rainfall leading to possible flooding is anticipated in late 2015 through 2016. South east Pakistan is currently experiencing drought conditions	FAO: FAO Pakistan is currently leading a drought assessment	20 million (Flood, 2010); 26 700 (Landslide, 2010)	9.5 billion (Flood, 2010); 18 million (Landslide, 2010)

ASIA AND THE PACIFIC (cont.)					
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)
Timor-Leste (43)	Drought	On average, during El Niño years, Timor-Leste sees 19 percent less rainfall resulting in drought-like conditions that could persist into the dry season. Increased sea surface temperatures are anticipated to have a negative effect on reefs and the fisheries sector. Rainfall has been considerably below average in October. Usually rains will intensify in October and pick up in mid-November, when planting operations for the main season start. If the forecast for poor rains this season is confirmed, this would especially affect the 2016 main season crops, as largely rain-fed.	Government and other partners: The Ministry of Agriculture and fisheries is purchasing maize seeds in order to distribute to farmers in case of poor germination because of a long dry spell. FAO: Delivering key messages to farmers on how to minimize the effects of El Niño, and increasing the awareness campaign on conservation agriculture as a cropping system that can retain more moisture in the soil		
Cambodia (50)	Drought	Main season 2015 rice output to decline slightly due to dry conditions. Latest official estimates, as of 3 September, indicate that some 81 722 hectares have been planted with maize, 12% below last year's level, which was already low. FAO has lowered its forecast to 500 000 tonnes – 9% down from the 2014 level and 36% below the five-year average.		650 000 (Drought, 2002); 178 000 (Cyclone, 2009)	38 million (Drought, 2002); 10 000 (Cyclone, 1997)

ASIA AND THE PACIFIC (cont.)					
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)
Democratic People's Republic of Korea (72)	Drought	FAO forecasts 2015 rice production at 2.3 million tonnes, 12 % below last year's drought-affected output and 2015 maize production at 2.2 million tonnes, a drop of 15 percent.	FAO: committed USD 440 000 from TCP Emergency funds for emergency assistance to vulnerable farmers to mitigate the drought in north and south Hwanghae provinces. The project aims to reduce the impact on crop production while promoting complementary risk prevention and mitigation measures for more resilient farming systems.	(No data)	(No data)
Viet Nam (86)	Drought	Reports from the main meteorological and oceanic institutions suggest that El Niño conditions will strengthen and persist through winter 2015/16. Poor rains will affect crops in parts but overall prospects aggregate rice production remains favourable for 2015. Rice exports in 2015 are forecast slightly below last year's low level.	Government and other partners: Government issued alerts to raise awareness among at-risk communities. Partners remain on standby to help with threats of flooding and landslides.	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)
Peru (48)	Flood Cold Wave Fisheries	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. FAO: FAO is envisaging 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 south-west Ecuador in January–May 2016		54 000 (Flood, 2002)	271 million (1997/1998)
Bolivia (89)	Drought	Below-average rainfall predicted in the plains region. August 2015 WFP assessment indicated 15 000 people in need of assistance in the five most affected municipalities. Floods destroyed 60 000 ha of crops, 402 houses, roads and bridges leaving 33 000 people isolated.		625 000 (Drought, 2010); 12 000 (Cyclone, 2002)	100 million (Drought, 2010)
Guyana (112)	Drought	Below average rainfall anticipated to continue into March 2016		607 000 (Drought, 1997)	29 million (Drought, 1997)
Dominica (153)	Cyclone	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.	FAO: Committed USD 300 000 from TCP Emergency funds for immediate assistance to restore agricultural productivity. Fields will be restored and tools distributed.		

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