



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 (12 November 2015)



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.

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).

In this report, FAO 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/

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.

Snapshot

Ethiopia: projections for 2015–2016 suggest that the 7.5 million people needing food assistance in October 2015 could increase up to 15 million.

Somalia: it is predicted that the main rivers will again flood. Animal disease outbreaks are likely.

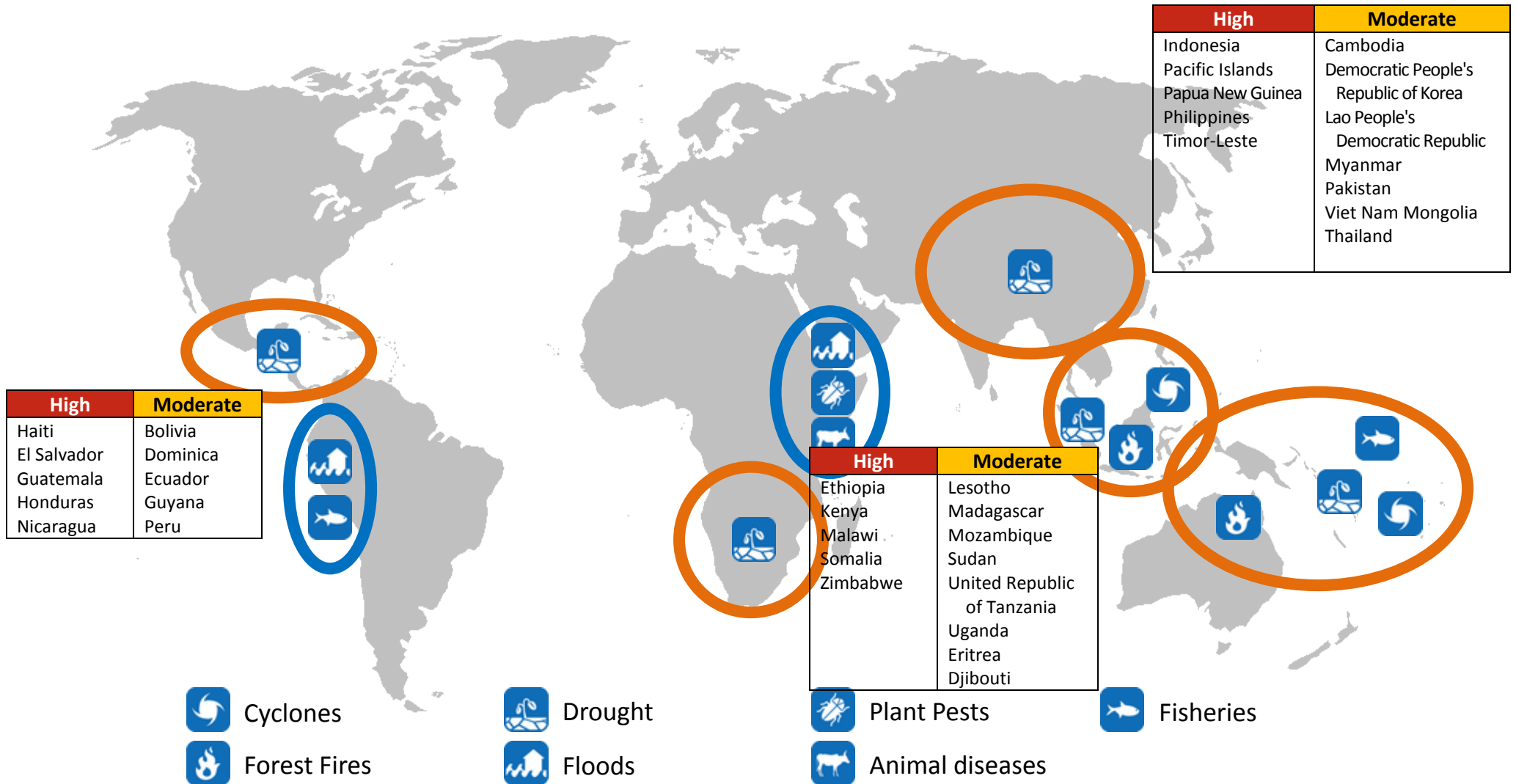
Southern African Region: Cereal Production, compared to 2014, has fallen by 22 percent. In particular, **Zimbabwe** national cereal production is 50 percent below average due to lack of rainfall.

Central America: up to 80 percent crop losses in the Dry Corridor of El Salvador, Guatemala, Honduras and Nicaragua due to lack of rainfall affecting more than 4.2 million people.

Papua New Guinea: around 2.4 million people – about one third of the country's total population – are already affected by El Niño induced drought and frost. Numbers are very likely to increase further.

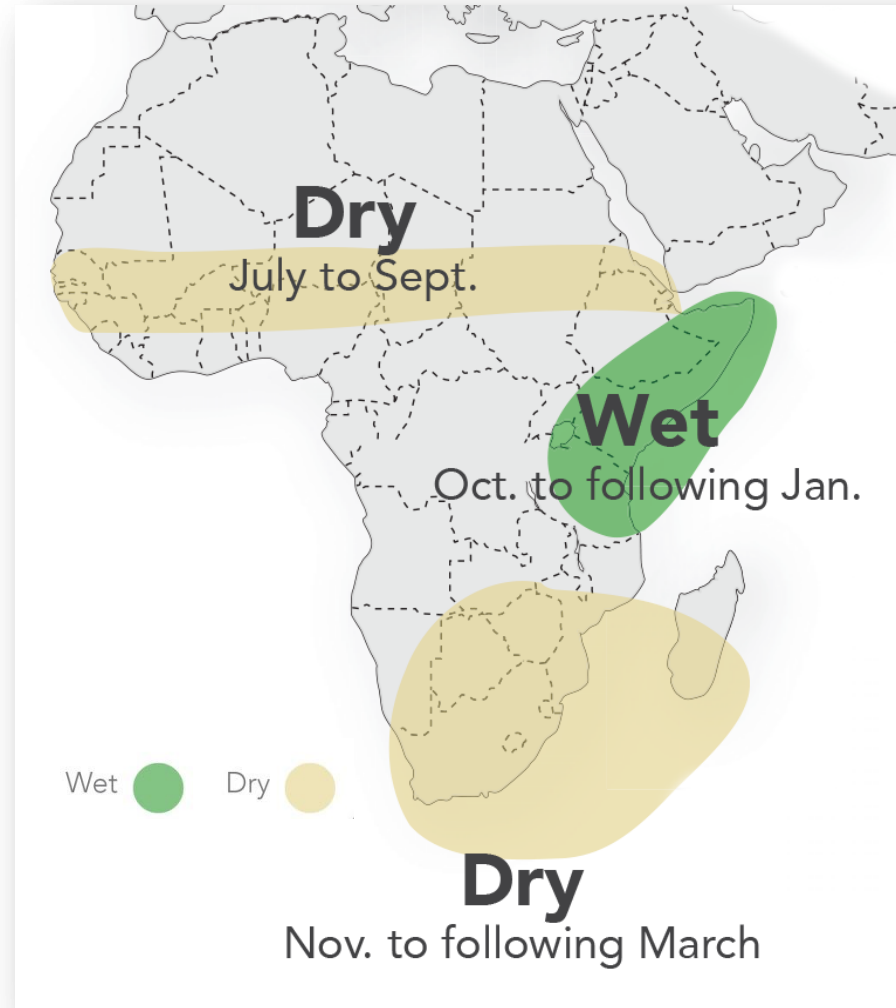
Mongolia: facing the likelihood of a severe winter after a drought during the summer, up to 40 percent of livestock are in danger of perishing due to lack of fodder.

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 disease

Outlook

- ◆ FAO-Managed Somalia Water and Land Information Network (SWALIM) highlights the risk of above average rainfall and associated floods along 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 by flash floods.
- ◆ Potential damage to “defy” crops to be harvested early next year and infrastructure, outbreaks of prevalent animal disease and desert locust numbers could increase and, if unchecked, hopper bands and adult swarms may eventually form.
- ◆ Enhanced rainfall are expected to improve pasture conditions and second "deyr" season crop production in arid and semi-arid areas

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 being 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.
- Together with Somaliland’s Ministry of Agriculture agreed to strengthen monitoring in the winter (November–March) breeding areas of desert locusts and provide training in collaboration with the Desert Locust Control Organization for Eastern Africa using FAO-Somalia funds.

Funding requirements

USD 55 million required to fully implement the FAO El Niño Plan.



Ethiopia

INFORM Rank: 15



Drought in northwest



Floods in south



Animal disease

Outlook

- ◆ Ongoing weather effects will continue with strong rains forecast for the Omo, Shabelle and Awash rivers with potential flooding in the last quarter of 2015.
- ◆ 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.
- ◆ 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 4.5 million (August 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

- The National Disaster Prevention and Preparedness Committee, which oversees government response, asked for the annual multisector, multiagency assessment to be brought forward during October. This will enable the Government and partners to expedite planning and assistance provision for 2016.
- Government allocated USD 35 million for food and non-food items and asked donors for support.
- The Ethiopia HCT prepared a disaster appeal in September, identifying USD 237 million to pre-position supplies for the first quarter of 2016.

FAO

- Established, under the HCT, that USD 25.5 million was needed for crop support, animal vaccination, fodder production and restocking to support 1 million farmers and 1.5 million animals.
- 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 300 000 from different projects and in the process of reprogramming a further EUR 350 000.
- Supported the Agricultural Task Force in developing the Ethiopia El Niño Response Plan (ENRP 2015/16), which identifies priority areas and activities for intervention as well as concrete timelines.

Funding requirements

USD 25.5 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 disease

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.
- ◆ Production of “short rains” season crops to be harvested early next year could be enhanced in arid and semi-arid areas.

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, development partners and private sector dialogue on a joint initiative to mitigate the effects of El Niño held on 25 September 2015.
- National Disaster Operation Centre-led El Niño preparedness and response taskforce operational and regular meetings have started with line ministries.
- The Government has developed a multisectoral El Niño Preparedness Plan with specific needs for agriculture, irrigation, livestock and fisheries.
- 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.



Drought

Outlook

- ◆ Drier than average conditions are expected to continue, increasing the possibility of reduced maize production. National cereal production is estimated at 50 percent below 2014 figures.
- ◆ The Zimbabwe Vulnerability Assessment Committee (ZimVAC) estimated that 10 percent of the rural population is food insecure from October to December 2015.
- ◆ 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 rainfall will be normal.
- ◆ The ZimVAC’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.

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. The following activities have been proposed for this programme:
 - Subsidize drought-tolerant seeds (small grains and legumes).
 - Subsidize survival stock feed.
 - Rehabilitate 280 water points.
 - Carry out Foot-and-mouth disease and anthrax vaccination.
 - Strengthen early warning systems.

Funding requirements

Current funding gap of USD 30.4 million.



Drought

Outlook

- ◆ Unfavorable weather has cut Malawi’s maize production by 30 percent compared with 2014.
- ◆ Between 2 and 3 million people may face a food security crisis by February 2016 when the lean season is at its peak.
- ◆ Drier than average conditions are expected to continue with national and regional forecasts showing erratic and lower rainfall patterns than normal.
- ◆ Malawi Vulnerability Assessment Committee reports that about 2.8 million people will require food assistance for a period of three to six months from October 2015 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	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 on community-based management of acute malnutrition and rapid SMS reporting on nutrition growth monitoring at health facilities in food insecure districts, for example Rumphi district.
- HCT 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.

FAO

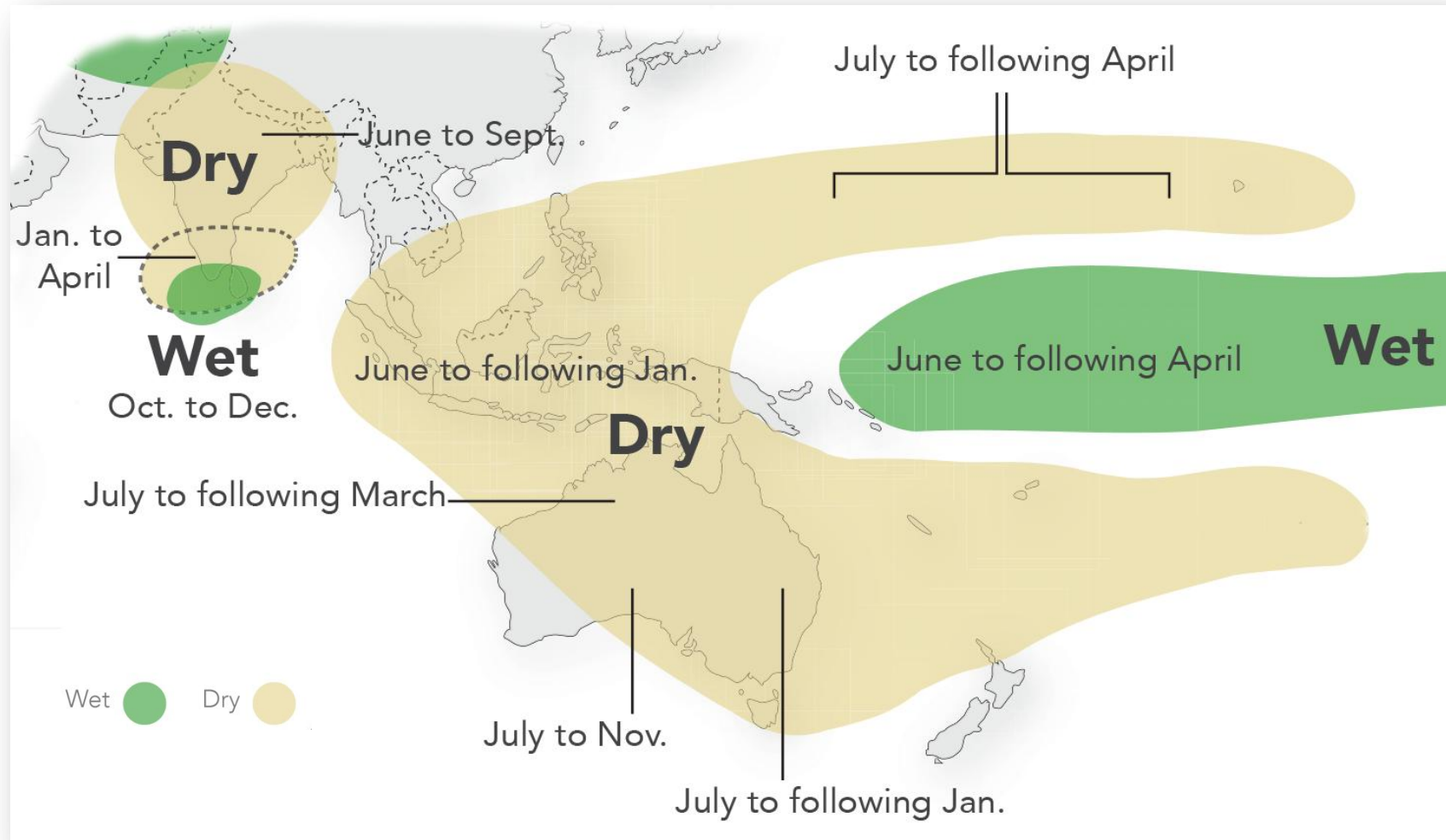
- Co-leads the Agriculture Cluster, which supported the Ministry of Agriculture and other stakeholders in designing the Agriculture Response Plan to the negative effects of El Niño. The total value of the agriculture component in the national response plan is USD 44 million.
- Mobilized nearly USD 2 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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2. Mason and Goddard, 2001. Probabilistic precipitation anomalies associated with ENSO. *Bull. Am. Meteorol. Soc.* 82, 619-638



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 has implemented activities to help farmers cope, such as cloud seeding, seed distribution, promoting crop diversification/rotation and water saving.

FAO

- Assisting the Department of Agriculture 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 Department of Agriculture and the Department of Science and Technology Philippine Atmospheric, Geophysical 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 southern Philippines.
- Supporting climate information dissemination through activities such as farmer field days and training agricultural extension workers in enhanced climate risk management.

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 Department of Agriculture regional field offices and local government units to prepare people for adaptation and mitigation strategic measure. 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, 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 Department of Agriculture and Livestock.
- 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 World Food Programme (WFP).
- Developed an El Niño Early Action and Response Plan for which USD 300 000 has been committed from internal sources.

Funding requirements

USD 4.9 million needed to assist 560 000 subsistence farmers.

Pacific Islands



Drought



Cyclone



Fisheries

Outlook

- ◆ Drought is forecast for northern and western Pacific threatening the livelihoods and well-being of 4 million people across the Pacific.
- ◆ Reduced rainfall in Fiji, Tonga, the Solomon Islands and others affecting crops and drinking water.
- ◆ In Fiji, at least 30 000 people are currently affected by drought and the sugar cane crop is 25 percent down.
- ◆ In Tonga, drought has been declared and further low rainfall is expected.

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 of which 7 million was attributed to livestock deaths (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.
- Emergency water deliveries to villages and schools in Fiji, 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.

FAO

FAO is developing three early action plans for high-risk countries in the Pacific:

- “El Niño Drought Preparation and Monitoring in Micronesia and Melanesia” (potentially supported by the Office of U.S. Foreign Disaster Assistance) is in the inception process. It will focus 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 capacities for integrating disaster risk reduction in agriculture in national services and community practices. Factsheets covering primary mitigation approaches including what types of food crops to plant, water management and crop site selection are being developed.

Funding requirements

USD 500 000 required for El Niño drought food insecurity monitoring, preparedness and support in Micronesia and Melanesia.



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 Sumatera and Kalimantan islands, with official reports indicating some 43 million people affected by haze.
- ◆ Several 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 anticipated to be delayed up to 6 weeks. This may have 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)

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 IDR 3.5 trillion (USD 258 million) intended 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 on to support food security assessments, interagency collaboration and the development of an El Niño Early Action and Response Plan.

Funding requirements

Currently being assessed



Drought

Outlook

- ◆ 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
- ◆ GIEWS Earth Observation Tool 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 are confirmed, this would especially affect the 2016 main season crops, as largely rainfed.

Timor-Leste early action

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

- FAO Timor-Leste is 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.

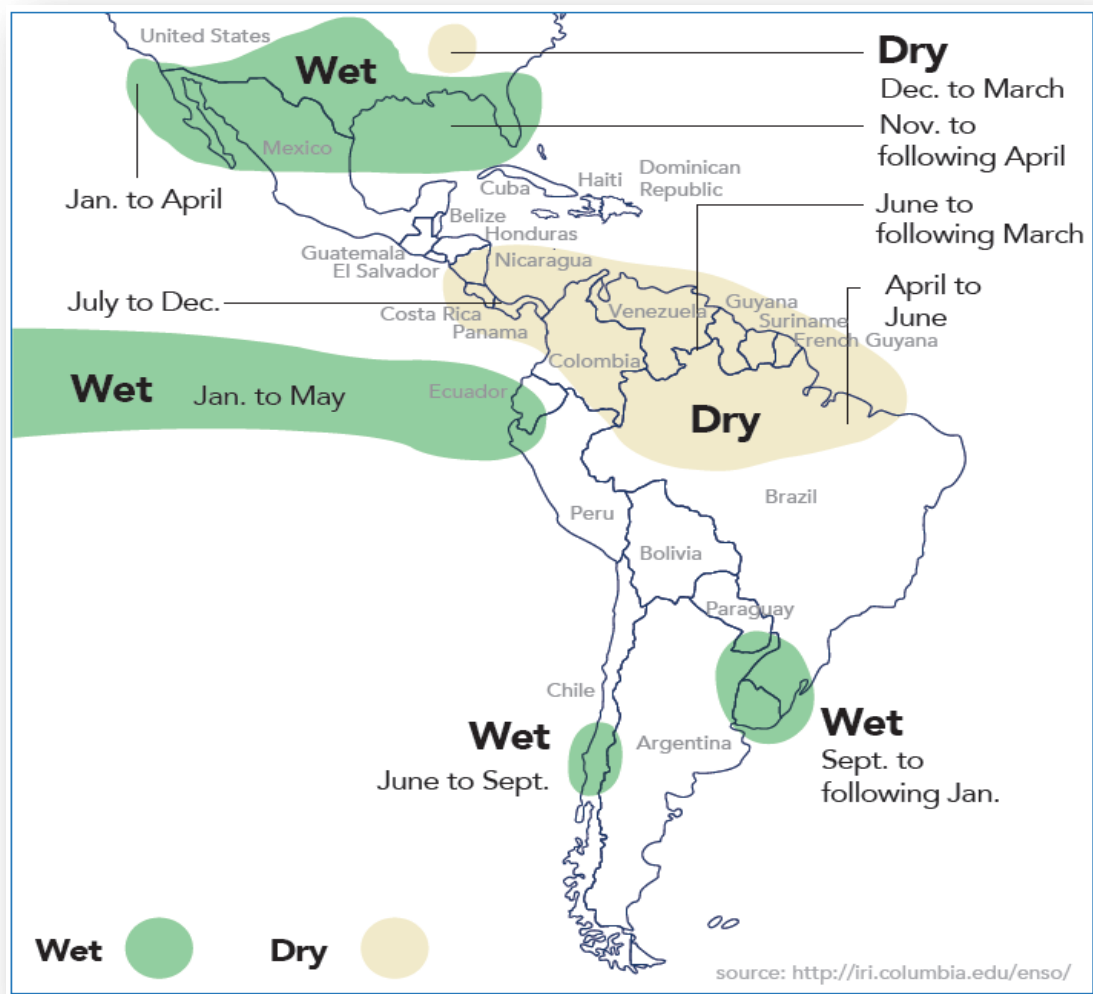
Funding requirements

Currently being assessed

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 Sud, Sud-Est, Nord-Ouest, Nord-Est 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 limited investment in agriculture.
- ◆ 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 increased pressure on scarce water and food supply 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 have been led by CNSA/Ministry of Agriculture, FEWSNET and FAO/GIEWS. Initiatives are in place for the reinforcement of monitoring and surveillance mechanisms and to improve the coordination among stakeholders.
- Most response of the humanitarian community, with involvement of technical agencies (national and departmental), has targeted rural communities and focused on food and water distribution, rehabilitation of water supply systems and cash for work activities.
- ECHO has included in the 2016 Humanitarian Implementation Plan a dedicated response to the drought coupled with the effects of El Niño.

FAO

- FAO and WFP Haiti are in agreement that a CFSAM is needed in Haiti and are in the process of consulting the Ministry of Agriculture and CNSA (national food security coordination).
- Seed and tool distribution are ongoing in the most drought-affected departments (Sud-Est and Nord-Ouest) through the CERF (UN system).
- Contribution to the provisional assessment of the spring agricultural season carried out by CNSA and participation in the national and departmental coordination table to monitor the situation and identify appropriate responses.
- Strengthening the adaptation capacity of farming families and their communities through trainings and farmer field schools.
- Implementation of good practices and improve techniques such as agroforestry, conservation farming, integrated production models, etc. to improve the resilience of the agro-ecosystems



Drought

Outlook

- ◆ El Niño has caused decreased rainfall and drought in most parts of El Salvador.
- ◆ 192 000 households are facing severe acute malnutrition.
- ◆ 60 percent of the maize crop was destroyed by irregular rainfall earlier this year. Drought has affected 161 181 farmers (mostly corn producers. Corn production losses are estimated at 4.7 million quintals (213 000 tonnes).
- ◆ 2015 current drought’s impact on the economy has increased with respect to 2014 drought, rising from USD 70 to 100 million. Losses are estimated at USD 28 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 tariff to mitigate price increases.

FAO

- Implementing an emergency response program and is designing a new project to support affected farmers.
- 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.
- Implementing the Regional Programme in the Dry Corridor to strengthen resilience to disaster risks, targeting 50 000 households of small scale producers.
- Organized a regional workshop in October on the effects of El Niño with the governments of 12 countries and key regional UN, IFRC and NGO partners.

Regional funding requirements

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.



Drought

Outlook

- ◆ Estimated losses of over 80 percent of the first season crop in the Dry Corridor of Guatemala, hurting 154 000 families.
- ◆ With El Niño conditions forecast to last until at least March 2016, it is unlikely that households will be able to recover quickly.
- ◆ In the western highlands, households affected by coffee rust and below-average rainfall during 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.

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.

FAO

- Implementing an emergency response programme targeting 100 000 families in Guatemala and is designing a new project to support affected farmers.
- Implementing the Regional Programme in the Dry Corridor to strengthen resilience to disaster risks, targeting 50 000 households of small scale producers.
- Organized a regional workshop in October on the effects of El Niño with the governments of 12 countries and key regional United Nations, International Federation of Red Cross and Red Crescent Societies (IFRC) and NGO partners.

Regional funding requirements

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.



Drought

Outlook

- ◆ Over 400 000 people are in need of immediate humanitarian assistance in 13 departments.
- ◆ 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.
- WFP is already providing direct assistance to 29 percent of the affected population.

FAO

- Implementing an emergency response programme and is designing a new project to support affected farmers.
- Implementing the Regional Programme in the Dry Corridor to strengthen resilience to disaster risks, targeting 50 000 households of small scale producers.
- Organized a regional workshop in October on the effects of El Niño with the governments of 12 countries and key regional United Nations, IFRC and NGO partners.

Regional funding requirements

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.



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.

FAO

- Organized a regional workshop in October on the effects of El Niño with the governments of 12 countries and key regional UN, IFRC and NGO partners.
- Implementing the Regional Programme in the Dry Corridor to strengthen resilience to disaster risks, targeting 50 000 households of small scale producers.

Regional funding requirements

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.

Moderate priorities for early action and response

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 (5)	Drought; Animal disease	<p>The main rainy season is from June to September, below-average rainfall was recorded in eastern Sudan and late rains with dry spells contributed to reduced area planted and late planting with shorter duration crops. The low availability of soil moisture could also impact the subsequent wheat crop. As a result, there is an increased risk (30 – 50 percent) of crop losses as well of low harvest and an intensified lean season, with a significant fall in food availability and rise in food insecurity and malnutrition, especially among small-scale farmers and pastoralists, who comprise the bulk of Sudan’s rural poor.</p> <p>While this scenario is part of inter-annual climate variability, El Niño has contributed to some extent to reduced rainfall. Seasonal forecasts for the current season (October – December 2015), are not issued because as this is not a major rainy season and due to inadequate prediction skill</p>	<p>Government and other partners: are closely monitoring the situation and preparing to conduct a post-harvest assessment.</p> <p>FAO: Advocating for early mitigation with interventions to support families facing high risk of crop losses to grow vegetables and legumes over the winter farming season; seeking support for livestock vaccination, treatment and feeding services to address increased risk of animal disease; supporting monitoring by Government 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 who are facing increased risk of food insecurity and malnutrition due to rainfall shortages.</p>	4.3 million (Drought, 2009)	(no data)

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)
Uganda (14)	Flood	Above- to well above-average precipitation is likely in most of Uganda. This will increase the likely of floods and landslides, which, through localized production shortfalls and displacements, may have a severe localized impact on food security (Currently, about 295,000 people in Karamoja Region)	Government and other partners: Government of Uganda plans to relocate 100 000 people currently living in flood prone areas, has alerted and trained units of the armed forces, prepared contingency plans and is pre-positioning excavators and bulldozers. WFP is supporting the Government in disaster preparedness	154 000 (Flood, 1997)	1 million (Flood, 1997)
Mozambique (22)	Flood	The rainfall forecast for October–December 2015 predicts normal rainfall with a bias towards above normal throughout the provinces of Niassa, Cabo Delgado, Nampula and northern Zambezia. These above normal rains in the northern areas including Zambezia province increases chances of flooding. Normal rainfall with a bias toward below normal rainfall is expected in Tete, Manica, Sofala, Inhambane, Gaza and Maputo provinces. The country has already suffered unusually extensive flooding earlier in the year in the northwest		400 000 (Flood, 1997); 23 000 (Cyclone, 2003)	3 million (Cyclone, 2009)
United Republic of Tanzania (27)	Flood	Increased rainfall is expected to be most beneficial in northern Mount Kilimanjaro, Arusha, Lake zone and eastern Tanzania. Highlands: good harvest expected, northeastern highlands bumper harvest expected as 90 percent of food is grown in this <i>Vuli</i> season. Lowlands: expected crop failure due to flooding		50 000 total affected (Flood, 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)
Madagascar (42)	Flood (north); Drought (south)	Northern and central Madagascar is expected to receive above-normal rainfall, while the south is expecting to receive normal to below-normal rainfall. The above normal rains in Madagascar could also result in increased chances of flooding which in the past has also affected agricultural/cropping activities. For the southern areas, increased chances of normal to below normal rains will also likely result in drought conditions		600 000 (Drought, 2002); 20 000 (Flood, 1998)	150 million (Flood, 2003)
Eritrea (53)	Drought	Severe drought conditions are present in pastoral areas. According to satellite imagery, severe drought conditions prevailed in coastal pastoral areas and in most districts the cumulative rainfall in June and July was 30-35 percent below average. In some areas, including Foro, Gel'alo and Massawa, almost no rains were received in the first two months of the rainy season. The average to above-average rainfall received in August was insufficient to offset the early season dryness and the severe deterioration of grazing resources			
Djibouti (58)	Drought	Inadequate pasture availability due to consecutive unfavorable rainy seasons. Crisis (IPC Phase 3) acute food insecurity is anticipated to continue for poor households in the Southeastern Pastoral and Obock pastoral areas through most of 2015. Approximately 120 000 people (about 15 percent of the population) are estimated to be severely food insecure. Two-thirds of them are receiving humanitarian assistance		200 000 (Drought, 2010)	

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)
Lesotho (81)	Drought	The seasonal rainfall outlook issued in September 2015 by the Ministry of Energy and Meteorology forecast hot and dry weather conditions during the coming rainfall season. In Lesotho, rain usually falls in August and September, however the country has been experiencing dry conditions since August. Average- to below-average rainfall is anticipated countrywide from October to March 2016. The outlook states that there is a likelihood of a meteorological drought in the coming season. Agricultural cultivation will be hampered by insufficient soil moisture and food security could deteriorate as a result		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 in Ayeyarwady and Sagaing regions after heavy flooding in July/August	Government and other partners: Government's Department of Meteorology and Hydrology 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)
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 to maize, 12 percent below last year's level, which was already reduced due to dry weather. As a result, FAO has lowered its forecast for 2015 maize production to 500 000 tonnes, which would be 9 percent down from the 2014 reduced harvest and 36 percent 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)
Thailand (69)	Drought	2015 main season production has been affected by poor rains and the low levels of water in reservoirs is expected to negatively affected also the ongoing 2015 off-season crop. Although, prices are overall low and the country possesses big volumes of rice stocks, it remains a country of concern. Poor rains during the first part of the 2015 main rainy season delayed planting operations and affected yields The 2015 aggregate rice production is expected to decline by 6 percent compared with 2014 already reduced level. Conditions improved somewhat since mid-July, permitting planting activities to progress well, however, some soil moisture stress was still evident in the main rice producing areas located in the north-eastern and northern provinces. Concerns also exist for the 2015 mainly irrigated off-season crop, currently planted, as the poor rains have depleted water levels in the major reservoirs		6.5 million (2010)	
Democratic People's Republic of Korea (72)	Drought	FAO forecasts 2015 rice production at 2.3 million tonnes, 12 percent below last year's drought-affected output and 2015 maize production at 2.2 million tonnes, a drop of 15 percent from last year's level		(No data)	(No data)

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)
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)
Mongolia (118)	Cold Wave	The combined impacts of drought and a likely <i>dzud</i> (cold winter), is putting the livelihoods of vulnerable herder households at severe risk. The summer drought has resulted in an estimated 40 percent reduction, compared to the previous five-year average, in wheat harvest and significantly reduced vegetation growth on grazing pasture. Current livestock population is approximately 70 million. Pasture carrying capacity is sufficient for only 60 percent of livestock and even without the predicted cold weather herders are not likely to have sufficient fat stores to take their livestock through the winter. Oversaturation of livestock and livestock products in the national market has caused price decreases of 40 to 60 percent compared to last year, exacerbating household debt and cash deficits.	Government and other partner Government plans to allocate USD 5.3 million to support herders overcome the potentially harsh winter ahead. It 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 <i>dzud</i> in which assessments and updates were given by the Information and Research Institute of Meteorology, Hydrology and Environment, National Emergency Management Agency, Ministry of Food and Agriculture, Ministry of Health and Sports, and FAO. FAO: Compiling winter preparedness information to highlight gaps in those areas where winter may be difficult. Deployed a livelihood expert and early action to support the development and implementation of an early action plan for the upcoming <i>dzud</i> .	770 000 (Cold wave, 2009)	62 million (Cold wave, 2009); 10 million head of livestock lost (Cold wave, 2009–2010)

LATIN AMERICAN AND THE CARIBBEAN					
Country (INFORM rank)	Potential disaster(s)	Outlook/current situation	Early action and response	Highest impacts recorded for a single disaster event in 1997–1998, 2002–2003 or 2009–2010	
				Total people affected	Total damage (USD)
Peru (48)	Flood Cold Wave Fisheries	Above average rainfall is anticipated in northern Peru, possibly causing flooding and upsurge in locusts. The National Institute of Civil Defense reports that freezing temperatures and snowfall left 1 209 people homeless in nine departments, as well as 487 569 people affected in Puno and Pasco. It is estimated that 221 123 cattle are lost and 392 923 affected. The cold wave damaged 128 967 ha of crops and destroyed another 34 839 ha	Government and other partners: Authorities assisting the affected people with beds, mattresses, hygiene kits and food. A Strong response mechanism has been put in place by the Government. FAO: FAO is envisaging the establishment of South-South Cooperation on El Nino response with regional partners	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 food assistance in the five most affected municipalities. Floods destroyed 60 000 ha of crops, 402 houses and roads and bridges leaving more than 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)

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