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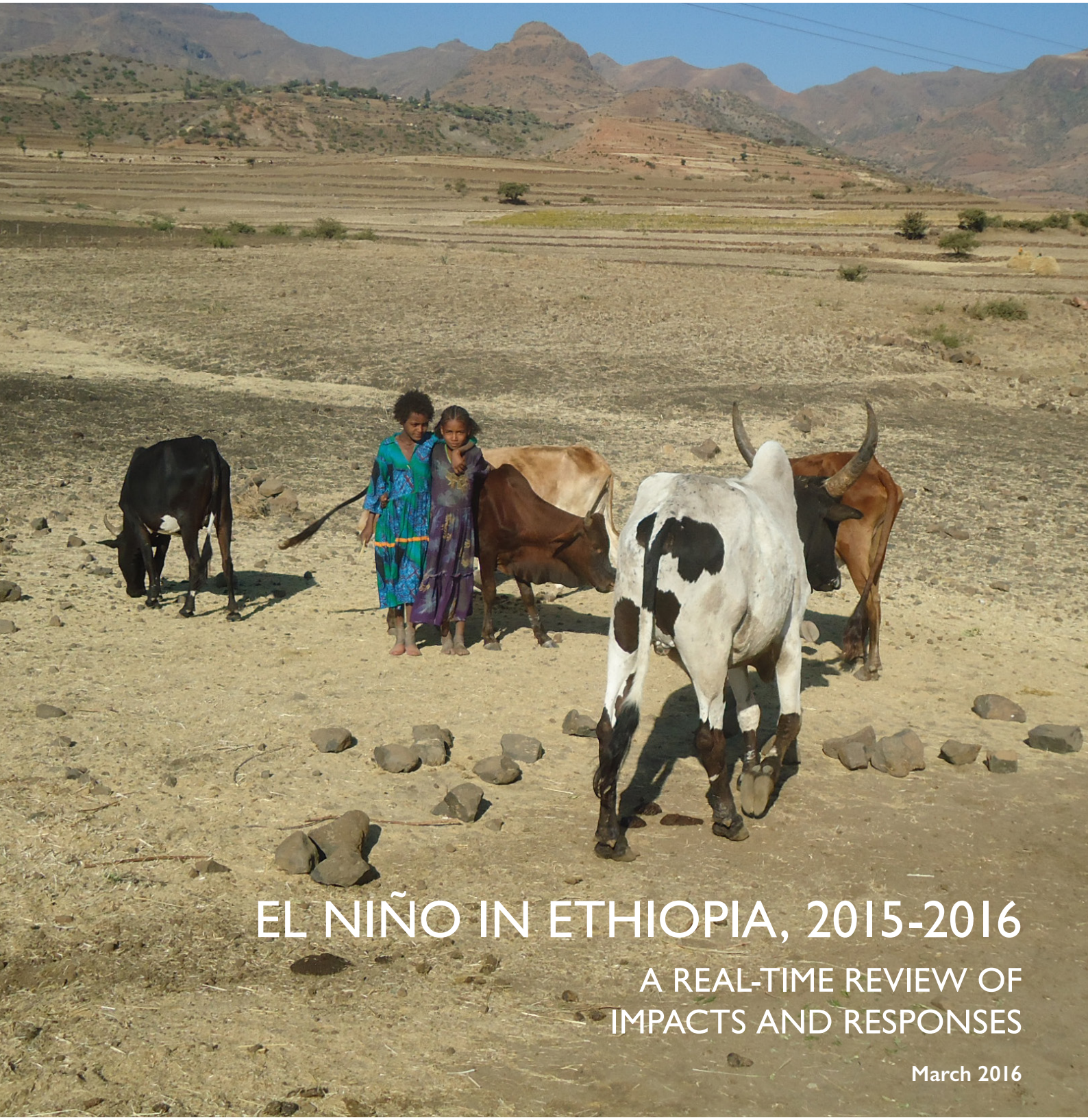

EL NIÑO IN ETHIOPIA, 2015-2016

A REAL-TIME REVIEW OF IMPACTS AND RESPONSES

March 2016

USAID
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USAID/Ethiopia Agriculture Knowledge, Learning, Documentation and Policy Project
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The USAID/Ethiopia Agriculture Knowledge, Learning, Documentation and Policy Project is implemented by the Feinstein International Center, Friedman School of Nutrition Science and Policy, Tufts University. This report was produced by Andy Catley, Adrian Cullis and Dawit Abebe.

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Acronyms

AAME	African Adult Male Equivalent
AfDB	African Development Bank
AKLDP	USAID Agriculture Knowledge, Learning, Documentation and Policy Project
AMDe	USAID Agricultural Growth Programme- Agribusiness and Market Development
APDA	Afar Pastoralist Development Association
ATF	Agriculture Task Force
AU	African Union
DART	Disaster Assistance Response Team
DFAP	Developmental Food Assistance Program
DFID	Department for International Development
DRMFSS	Disaster Risk Management and Food Security Sector
DRSLP	Drought Resilience and Sustainable Livelihoods Program
ECHO	Humanitarian Aid and Civil Protection department
EGTE	Ethiopia Grain Trade Enterprise
ENGINE	USAID Empowering New Generations to Improve Nutrition and Economic Opportunities
ENCO	Emergency Nutrition Coordination Unit
ENSO	El Niño Southern Oscillation
ETB	Ethiopian birr
EU	European Union
FAO	Food and Agriculture Organisation
FEWSNET	Famine Early Warning Systems Network
GAM	Global acute malnutrition
GRAD	USAID Graduation with Resilience and Development
Ha	hectare
HIP	Humanitarian Implementation Plan
HSNP	Hunger Safety Net Programme
HRD	Humanitarian Response Document
ICPAC	IGAD Climate Prediction and Application Center
JEOPS	Joint Emergency Operation
LEGS	Livestock Emergency Guidelines and Standards
LMD	USAID Agricultural Growth Programme-Livestock Market Development
MAM	Moderate Acute Malnutrition
MTE	Mid-term evaluation
NDRMCC	National Disaster Risk Management Coordination Commission
OFDA	Office for Foreign Disaster Assistance
PSNP	Productive Safety Net Programme
PRIME	USAID Pastoral Resilience and Improved Market Expansion
RPLRP	Regional Pastoral Livelihoods Resilience Project
SAM	Severe Acute Malnutrition
SCI	Save the Children International
SGR	Strategic Grain Reserve
SNNP	Southern Nations, Nationalities and Peoples Region
SST	Sea Surface Temperature
TFP	Therapeutic Feeding Programme
TLU	Tropical Livestock Unit
USAID	United States Agency for International Development
UN	United Nations
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
UNOCHA	United Nations Office for the Coordination of Humanitarian Affairs
WASH	Water and Sanitation for Health
WFP	World Food Programme

SUMMARY

In early to mid-2015 there were predictions that a major El Niño event would cause adverse weather conditions across East Africa, with severe droughts and floods. Although these predictions did not play out across the whole region, Ethiopia suffered its worst drought in decades due to a combination of pre-El Niño declines in rainfall in specific areas, followed by poor and erratic summer rains. In March 2016 the drought in Ethiopia was ongoing, and affected both highland agricultural area and lowland pastoralist areas. The 2016 Humanitarian Response Document (HRD) released in December 2015 requested humanitarian assistance for 10.2 million people, with a further 7.9 million people to be supported by the Productive Safety Net Programme (PSNP). The total appeal amount was US$1.4 billion, with about 53 per cent of this amount pledged by mid-March, 2016.

The report is a real-time review of El Niño-related impact and responses in Ethiopia to the end of March 2016. It's analysis and recommendations should be seen as indicative and provisional, and subject to validation over time.

Key findings

1. The Government of Ethiopia was widely recognized for its response to the El Niño crisis, the timeliness of food assistance, and the commitment of an unprecedented US$700 million to emergency response by March 2016.
2. There was widespread use of flexible funding and crisis modifiers in development and resilience projects supported by various donors, especially USAID, EU and DFID. In general, these were reported to result in timely responses, which preceded typical humanitarian projects.
3. In Ethiopia some critical early warning reports from international networks lagged behind local early warning and 'hotspot' categorizations, probably contributing to delays in responses from some donors.
4. The Productive Saftey Net Programme (PSNP) in Ethiopia showed how contingency arrangements could be used during emergencies, and like crisis modifiers, provided timely assistance relative to typical humanitarian projects. However, the contingency transfers under the PSNP were not sustained into late 2015, and regular transfers from 2016 were delayed. The PSNP provided limited contingency support to lowland areas.
5. Coordination challenges, as seen frequently in past emergencies, continued to hinder effective response. Examples included:
    - a substantial coordination gap between the PSNP and UN humanitarian agencies
    - weak UN cluster lead coordination
    - weaknesses in coordination between some new Ministries and the new National Disaster Risk Management Coordination Commission
    - weak coordination between government livestock support and the livestock projects supported by donors.
6. The UN system was seen as severely stretched in Ethiopia during the far more severe drought. The UN was commended for its work with the Government of Ethiopia to release the 2016 HRD, but this was countered by concerns about cluster coordination and capacity to prioritize sector needs with stakeholders.

Recommendations

Short-term priorities

The ongoing crisis in Ethiopia means that some recommendations are urgent:

1. Joint rapid analysis of food pipelines and barriers, and a single plan for food procurement and delivery; USAID has already finalized a food pipeline and market analysis; various logistical issues with food delivery need to be addressed, some of which are within USAID's manageable interests.

2. Improved quality of UN coordination at specific cluster levels e.g. health, agriculture and WASH. It is assumed that USAID may influence discussion on how best to achieve this.
3. Prioritization of interventions – e.g. general food delivery with full food basket will reduce the number of Moderate Acute Malnutrition (MAM) cases and therefore the number of Severe Acute Malnutrition (SAM) cases; MAM is likely to rise if general food distribution underperforms. It is assumed that USAID may influence discussion on how best to achieve this.
4. Continue to raise funds while recognizing the quality concerns in the design and delivery of emergency assistance across various sectors. This falls within USAID's manageable interests with respect to USAID programs and projects.
5. Overcome coordination issues between HRD and PSNP. As a major actor in the PNSP, it is assumed that USAID can contribute to dialogue and action to improve coordination.
6. Support the redesign of the PSNP in lowland areas. As a major actor in the PNSP it is assumed that USAID can contribute to dialogue and action around the redesign process.
7. Improve coordination between government and donor-supported emergency livelihood responses in the livestock sector. USAID might support this by, for example, seconding a livestock specialist to the government-donor-NGO Agriculture Task Force.

<u>Longer-term recommendations</u>

1. Support the further evaluation and use of flexible funding and crisis modifiers in resilience and development projects in drought-prone areas, including benefit-cost analysis. This is within USAID manageable interest with respect to USAID programs and projects.
2. Support external review and evaluation of large-scale resilience programs in drought-prone areas, including analysis of progress towards the building of key assets to sufficient levels to withstand major droughts. Consider options for balancing investments in rural poverty reduction with investments in job creation outside of rural areas, and related support to urban development. This is within USAID manageable interest with respect to USAID programs and projects.
4. In drought prone areas, strengthen the use of crisis modifiers in development or resilience projects. Among project managers, ensure a common understanding of the principles of resilience in terms of integrating development and relief. Also ensure orientation on livelihoods-based approaches to humanitarian response, including support to existing markets and services, and involvement of the private sector. At the RFP/RFA stage, request draft plans for uses of crisis modifiers as an annex, and request applicants to describe organizational capacities to respond to drought. Encourage cross-project learning on experiences with crisis modifiers. These activities fall within USAID's managaeable interest for USAID projects and programs.
5. Further support and develop the contingency mechanisms in social protection programs, and promote coordination with humanitarian agencies; support external evaluation of these mechanisms over time. As a major actor in the PNSP in Ethiopia, it is assumed that USAID can contribute to dialogue and action to improve coordination and support further evaluations.
6. Continue to invest in early warning but with renewed efforts to improve the capacity of early warning systems to communicate complex climate predictions and analysis to non-climate specialists, including community-level users. This is within USAID's manageable interest via FEWSNET.
7. Support regional and cross-country learning across recommendations 1-5 above via IGAD, and IGAD IDRRSI for lowland areas.

1. INTRODUCTION

El Niño is a natural climate phenomenon that happens roughly every four years or so, linked to abnormally high ocean temperatures in the central and eastern Pacific. It increases the risk of extreme weather from droughts to floods to cyclones. Longer term, climate change is also expected to increase weather variability, so when combined with episodes like El Niño this could lead to more frequent extreme weather. The last major El Niño event in 1997 to 1998 led to severe droughts in the Sahel and the Indian Subcontinent as well as severe flooding in parts of East Africa. While difficult to predict, scientists reported that El Niño in 2015 would be the strongest on record and in part, this played out in other parts of the world in terms of flooding and above average rainfall.

In Ethiopia a very severe drought took hold in large parts of the Ethiopian highlands, and Afar and northern Somali regions, and a major humanitarian response began. In December 2015, the Humanitarian Response Document (HRD) released jointly by the Government of Ethiopia and UN called for emergency assistance for 10.2 million people, in addition to 7.9 million people under the national Productive Safety Net Programme (PSNP). At that point, the Government of Ethiopia had committed US$270 million to emergency support, and the 2016 HRD estimated needs at US$1.4 billion. By mid-March donors had pledged approximately 53 per cent of the appeal total and by late March, the Government of Ethiopia commitment had reached US$700 million.

The current crisis in Ethiopia is being labelled an 'El Niño crisis' or similar, but the drought is more due to a succession of weak or failed rains which in some areas, date back to mid 2014. While the El Niño event of 2015 can be associated with the erratic and poor summer rains in parts of Ethiopia, the impacts of the drought are an accumulation of pre-El Niño and El Niño related declines in rainfall. In terms of drought response, there was a very long lead-in time.

Review questions

This real-time review was based on the following tasks and questions, developed with and approved, by USAID:

1. Review and document the progression and impact of 2015 El Niño events in Ethiopia.
2. Review and document the planning and response of various regional actors to El Niño including the mitigation and response actions that were employed for specific events.
3. Describe the experiences of government, donor, UN and NGO actors in responding to El Niño, including views and case studies of where these actions worked well or not.
4. Based on one to three above, identify good practice and lessons learned for future El Niño scenarios and make recommendations on improving El Niño response.

Review design, methodology and limitations

In the scope of work for the review, USAID approved the following approach: '*The review will use a qualitative approach but drawing on quantitative data where applicable. This will include an analysis of literature combined with key informant interviews. Key informants will be selected from local government, community leaders, regional organizations (IGAD) relevant government donor and NGO offices in the region.*'

Given the humanitarian context, this was a rapid real-time review drawing on the approaches and methods of real-time evaluation in humanitarian assistance, but not limited to a single project or program. When using this the approach, the priority is to produce findings within a short timeframe, and triangulate findings from literature, key informant

interviews and field assessments. Information on the impacts and responses to the drought was collected in Ethiopia as follows:

- In Addis Ababa, key informant interviews with aid donors and NGO staff, and participation in coordination events.
- In drought-affected areas, field assessments in five of the six regions most badly affected viz. Amhara, Tigray, Oromia, Afar and Somali regions.
    - In Amhara, Tigray and Oromia, field assessments were conducted by AKLDP staff using focus group discussions, key informant interviews and participatory methods with farmers, traders and government staff in November and December 2015, with secondary data gathered from zonal and woreda Early Warning and Response Departments, and from the 2016 HRD. The eleven woredas visited were in North Wollo, South Wollo and Wag Himra (Amhara Region), South Tigray (Tigray Region), and East Haraghe and West Hararghe (Oromia Region) zones.
    - In Afar and Somali regions, the field assessments used key informant interviews and focus group discussions conducted in five woredas (11 kebeles) in December 2015 and January 2016.
    - In the drought-affected areas, the full list of woredas visited and the coverage of the PSNP and Feed The Future in these woredas is detailed in Annex 1.

In Ethiopia, the drought is ongoing and at the time of the review in January to March 2016, responses, funding commitments and coordination efforts were continuing to evolve among a large number of actors across multiple sectors – government, donors, NGOs, UN agencies and others, working on food and non-food assistance. Data and information was changing day-by-day, and accurate figures on activities were largely in the form of plans and expectations, rather than the actual delivery of assistance on the ground. In this situation it is important not to equate plans with timely delivery, or activity reports with impact on people affected by the drought; activity reports are not necessarily accurate. More systematic evaluations and impact assessments will be needed in Ethiopia to develop an evidence base and identify lessons. For these reasons, the review is framed as a real-time review, and its analysis and recommendations should be seen as indicative and provisional, and subject to validation over time.

2. REVIEW FINDINGS

2.1 Progression and impacts of the drought in Ethiopia

2.1.1 Rainfall, drought and El Niño

Rainfall in the Horn of Africa is influenced by weather systems that evolve in the Pacific Ocean, especially the central and east-central parts of the Pacific around the Equator. One of the main factors driving these systems is the temperature of the Pacific's surface, because this affects the air pressure above the sea, and related wind and rainfall patterns across large areas of the tropics and sub-tropics. Relatively large changes in the sea's temperature create unusual weather patterns, such as drought or excessive rainfall and storms.

Key terms
Sea surface temperature (SST) – the temperature of the sea close to its surface.
El Niño – a warming of the central Pacific leading to high-pressure weather systems.
La Niña – the opposite of El Niño warming, being a colder SST leading to low-pressure weather systems. For example, the Horn of Africa drought of 2011 was triggered by a deep and prolonged La Niña episode and resulted in a severe food security and nutrition crisis that affected the lives and livelihoods of more than 12.5 million people living in the region's drylands.
El Niño-Southern Oscillation (ENSO) – El Niño warming and La Niña cooling are coupled with each event lasting several years, but La Niña does not always follow El Niño. The ENSO is the changes in air pressure associated with the changes in SST.
Oceanic Niño Index (ONI) – based on SST measurements, a high ONI indicates that SST has shifted from average.

The relationship between El Niño events and drought in Ethiopia has been known for many years. For example, in 1997 it was suggested that, *'Empirical data indicate an association between ENSO events and droughts in Ethiopia. Thus, an ENSO-based early warning system, used effectively by policymakers, could help to reduce the societal impacts of drought in Ethiopia.'*[1] A detailed list of El Niño and La Niña events, and crises in Ethiopia is shown in Annex 2. While forecasting the intensity of an El Niño episode is difficult, in Ethiopia there was general agreement (before 2015-2016) that an El Niño episode has a high probability to cause:

- Above-normal rainfall from October to March in the south and south east areas; typically associated with supporting pastoralist areas due to good pasture but can also cause flooding and outbreaks of human and livestock diseases.
- Above-normal *belg* rains with an early onset as early as January or February. At the same time, harvesting the main season cereal crops between October and November may be disrupted due to off-season rains.
- Below-normal *kiremt* rains that are also typically late, erratic and shorter than usual.

2.1.2 Progression and impacts of the drought to early 2016

A time-line of the progression of the drought in Ethiopia, key events and drought responses is shown in Figure 1 below. When viewing the timeline it is important to recognize that even in the 'normal' years preceding El Niño in 2015, Ethiopia had substantial food security and malnutrition problems. For example, 44 per cent of children under five years of age were chronically malnourished with low height-for-age (stunted), 21 per cent were severely stunted, and 10 per cent had acute malnutrition (wasted) according to national statistics in 2011.[2] In December 2014, following a near-average harvest in northern Ethiopia, areas such as Sekota woreda, Wig Hamra Zone in Amhara Region had a global acute malnutrition rate

[1] Wolde-Georgis, T. (1997). El Niño and Drought Early Warning in Ethiopia. *Internet Journal of African Studies*, http://www.bradford.ac.uk/research-old/ijas/ijasno2/Georgis.html accessed January 2016
[2] CSA/ICF (2012), *Demographic and Health Survey 2011*. Central Statistical Agency, Addis Ababa and ICF International, Maryland

of 11.7 per cent. In lowland pastoralist areas, severe acute malnutrition (SAM) rates of greater than 10 per cent are common. These conditions are reflected in the large numbers of people receiving regular cash or food transfers under the PSNP, in addition to people receiving relief food aid or admitted to therapeutic feedings programs (TFP) in 'normal' years.

The government's Emergency Nutrition Coordination Unit (ENCU), established in 2000, plays a central role in monitoring nutritional status. It tracks admissions to TFP and monitors woredas identified as 'hotspot woredas' based on pre-agreed criteria. Therefore, the number and distribution of hotspot woredas is a very important part of the overall early warning system in Ethiopia. Priority 1 woredas are defined as, *'Hazards of high damaging level have occurred and affected the lives and livelihoods of the population with very severe lack of adequate food security and may include excess mortality, very high and increasing malnutrition, and irreversible livelihood asset depletion'*[3] and are seen as equivalent to 'Humanitarian Emergency' used by the Integrated Food Security Phase Classification (IPC).

Figure 1. Drought and El Niño timeline for Ethiopia, 2014 to March 2016

Time	**Ethiopia highlands**	**Afar Region and Sitti Zone, Somali Region**
2014 Jun-Aug	Poor summer *kiremt* rains in some woredas in North Gondar and Wag Himra zones, Amhara Region.	Main *karma* rain (Afar) and *karan* (Somali) rains below normal, as reported by herders and confirmed by meteorological stations. Herders report poor rains to local government; no response.
Sept	SST starts to increase (see Figure 4)	
	Poor *kiremt* continues in some woredas as above.	
Oct-Dec	SST El Niño threshold exceeded	
	Increasing TFP admissions – North Gondar and Wag Himra (reported by OCHA).	TFP data incomplete in Afar and Somali regions; low reporting rates.
2015 Jan	HRD: 2.9 million people need relief food; to be delivered by DRMFSS, WFP and JEOPS. UK Met Office reports SST trends and potential impact on spring rains in Ethiopia but SST dips below El Niño threshold: uncertainties over intensity. National SAM admissions to TFP – 18,333 minimum.	
Mar	Poor spring *belg* rain. Water shortages reported in 26 woredas in Amhara, Oromia and SNNP; limited water trucking starts. SAM spikes e.g. parts of Arsi, Bale, Hararghe and SNNP (reported by OCHA).	No short rains *sugum* (Afar) and *dirra* (Somali). Livestock mortality starts. Water shortages reported in 6 woredas, Afar Region, 5 woredas, Somali Region (OCHA). Water trucking starts in Afar.
	SST rises again above El Niño threshold	
Apr	Poor spring *belg* rain.	No short rains *sugum* (Afar) and *dirra* (Somali) – livestock mortality continues.
	SST continues to rise above El Niño threshold	
May	Major El Niño event confirmed – high probability of summer *kiremt* rain failure. Government prepares for election. ENCU reports 97 Priority 1 hotspot woredas.	
	OCHA reports unusual migration in Amhara due to water shortages.	OCHA reports 73,000 people affected by failed rains in Sitti zone, 10,000 children moving and 36% schools closed (OCHA).
June	Government declares failed *belg* on 4 June Ethiopa elections ATF paper provides guidance on drought mitigation and response HRF calls for proposals to respond to rising food insecurity and malnutrition SST continues to rise above El Niño threshold	

[3] http://www.dppc.gov.et/downloadable/Documentation/Hotspot%20Classification%20Guideline%20May%202014.pdf accessed January 2016

	OCHA reports continuing drought conditions in parts of Amhara and SNNP, and water trucking by regional bureaus. OCHA reports FEWSNET report of *'increased likelihood for a near normal to below normal kiremt'*. 90% probability of El Niño negatively affecting rainfall in 2015; 85% into 2016.	'Regular' PSNP3 food transfers end. Local NGO APDA drought response begins, Afar. CARE/PRIME livestock feed provision, Afar.
July	SST continues to rise above El Niño threshold National admissions of SAM to TFP increase to 31,729 – an 73% increase relative to January 2015	
	PSNP3 regular transfers end. Amhara and Tigray regions increase food aid 3.6 fold and 2.8 fold. PSNP4 contingency transfers begin. Poor *kiremt* rain.	No *karma/karan* rain. No PSNP contingency transfers.
August	Mid-year HRD released: 4.5 million people need food assistance; rise in non-food needs SST continues to rise above El Niño threshold OCHA predicts that reduced *meher* harvest plus failed *belg* will *'compound the dire food security situation'* ENCU reports 142 Priority 1 hotspot woredas	
	OCHA reports declining food security in *belg*-growing areas in Amhara, Tigray, SNNP. Livestock deaths reported, especially Amhara Region. Some government responses start - seed and livestock. Poor *kiremt* rain.	No *karma/karan* rain. No PSNP contingency transfers. OCHA reports declining food security in Somali Region, especially Sitti Zone. VSF-Germany starts livestock feed and veterinary support, Afar, mid August. Government drought response food distributions begin end August, Afar and Sitti; government livestock feed distributions start end August, Afar and Sitti.
Sept	SST continues to rise above El Niño threshold ATF updates roadmap for ag sector interventions OCHA reports only 82/142 Priority 1 hotspot woredas have TFPs i.e. a TFP gap of 60 woredas	
	PSNP4 contingency transfers end.	Government livestock feed distributions end, early Sept. SCI conducts field assessment, Sitti Zone. No PSNP contingency transfers.
Oct	Rapid pre-meher assessment mid-October: 8.2 million people need food assistance SST continues to rise above El Niño threshold Ministry of Education reports 3 million children in 198 woredas need emergency education support OCHA *'Ethiopia is experiencing its worst drought in decades'*	
	No PSNP contingency transfers.	CARE (Afar) and Mercy Corps (Sitti) livestock feed under PRIME; Mercy Corps destocking under PRIME. No PSNP contingency transfers.
Nov	SST continues to rise above El Niño threshold USAID FTF project plan El Niño responses BBC news report on Ethiopia drought 9 November	
	No PSNP contingency transfers.	No PSNP contingency transfers. Government livestock feed provision, Afar and Sitti.
Dec	HRD released mid December: -10.2 million people need relief food plus 7.9 million people under PSNP - 186 Priority 1 hotspot woredas - SAM predicted at 400,000 into 2016 SST peaks above El Niño threshold	
	No PSNP contingency transfers.	Mercy Corps/PRIME commercial destocking, Sitti. No PSNP contingency transfers.
2016 Jan	Ban-Ki Moon Round Table meeting, end January	
	PSNP4 starts, but no actual regular transfers.	No PSNP regular transfers. SC begins livestock feed and veterinary support, Sitti.
Mar	OFDA DART deployed Cereal gap estimated at 1.4-2.2 million tonnes to October 2016 Belmon-type food gap analysis: best scenario 2.5 million tonnes; worst scenario 3.2 million tonnes	

The timeline above shows that the current drought in Ethiopia is complex, and comprises a mix of failed or poor rains *before* the onset of El Niño, together with poor and erratic rains that can be attributed to El Niño with some certainty. The combinations of pre-El Niño and El Niño rainfall patterns vary by area, as do the impacts. Some key points are:

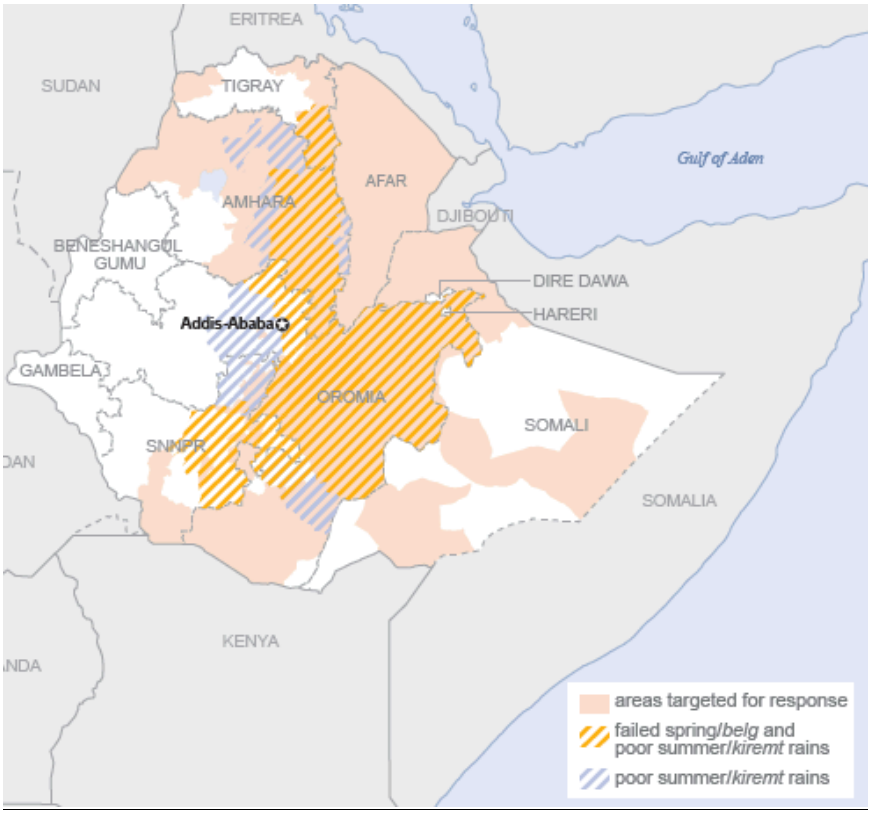
- The drought in Afar and northen Somali areas (lowland areas) probably started with poor summer rains in July and August 2014, before El Niño started. This was followed by failure of the short rains in March and April 2015, and then failure of the summer rains in July and August 2015. In this sequence of events, only the failed summer rains 2015 can be attributed to El Niño.

- The spring *belg* rains failed in some highland areas, with direct impacts on *belg*-dependent communities - more than 10 per cent of Ethiopia's population, or approximately 9 million people, is entirely dependent on the *belg* rains for agricultural production. However, there is uncertainty over whether the failure of the *belg* rains in 2015 can be attributed to El Niño.

- The summer *kiremt* rains were delayed, erratic and poor in some highland areas, with direct impacts on *kiremt*-dependent communities, and farmers who rely on both *belg* and *kiremt* rains. The *kiremt* rain can be attributed to El Niño with a high probability.

- In some highland areas e.g. parts of Wag Himra Zone, poor summer *kiremt* rains in 2014 led to rising levels of malnutrition even before the failed *belg* rains in early 2015.

Figure 2. Drought-affected areas of Ethiopia[4]



[4] Source: Ethiopia HRD, 2016

It follows that the story of the current drought in Ethiopia is partly a story of how pre-El Niño and El Niño related events combined to produce the current crisis. It is a complex drought, not only in terms of rainfall failures over time, but also in terms of its geographical distribution across different parts of the country, with a range of livelihoods affected (Figure 2).

The timeline also indicates some of the impacts of the drought to mid March 2016. Overall, there are increasing concerns that the drought jeopardizes many of the substantial gains in food security, health and education that have taken place in Ethiopia during the last 20 years or so. Further details are provided below.

Food security

Nationally, the drought has led to very substantial declines in household food security, with the official number of people needing relief food increasing from 2.9 million to 10.2 million during 2015, in addition to 7.9 million people under the PSNP i.e. a total of 18.1 million people requiring assistance in 2016. This is equivalent to approximately 19.5 per cent of total population.[5] In terms of the absolute number of people affected, this exceeds any previous drought in Ethiopia's modern history, but is similar to the major droughts of 1984 to 1985, and 2002 to 2003 in terms of the proportion of total population affected.[6] The total number of people affected cited above for 2016 is subject to debate. For example, a vulnerability analysis in 2014 estimated that 28 per cent of households in Ethiopia, equivalent to approximately 27 million people, were below the food poverty line.[7]

Human nutrition

Statistics to date indicate very substantial increases in national SAM admissions to TFP in hotspot woredas – admissions increased by 73 per cent between January and July 2015.[8] The 2016 HRD requests support for a record-level of 435,000 SAM cases, plus 1 million MAM cases in children, and 700,000 MAM cases in pregnant and lactating women. This is conservative estimate as, for example, there is likely to be variable coverage and performance of TFPs across hotspot woredas, and not all SAM cases will reach these programs.

Human health

The 2016 HRD explains that low availability of water, poor sanitation, poor nutrition and displacement will, '… *significantly increase the risks of increased mortality and morbidity, including from malnutrition, and due to outbreaks of communicable diseases, including measles, meningitis, malaria, dengue fever, diarrhoeal disease and acute respiratory disease'*. It was estimated that 20 per cent of the expected 435,000 children with SAM would develop medical complications and would need intensive medical care in hospital-based therapeutic feedings centers i.e. 87,000 children. Note that the impacts of the drought on loss of assets (see below) means that households are less able to pay for medical care.

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[5] Based on a total population in 2011 of 81.8 million according to the Central Statistics Agency http://www.countrystat.org/home.aspx?c=ETH&tr=12 and an average population growth of 2.5 per cent to 2016.

[6] In 1984 to 1985 approximately 8 million people were affected from a population of approximately 42.6 million i.e. 18.8 per cent; in 2002 to 2003, 12.6 million people were affected by drought from a population of around 69.1 million. Numbers of people affected in each case are from: Graham, J., Rashid, S. and Malek, M. (2011). Disaster Response and Emergency Risk Management in Ethiopia. In: Dorosh, P.A. and Rashid, S (eds.), *Food and Agriculture in Ethiopia: Progress and Policy Challenges*. International Food Policy Research Institute, Washington DC

[7] People below the food poverty line are unable to afford the minimum caloric intake for a healthy and active life. See CSA/WFP (2014), Comprehensive Food Security and Vulnerability Analysis (CFSVA): Ethiopia. Ethiopia Central Statistics Agency and World Food Programme, Addis Ababa.

[8] Up-to-date and reliable SAM admissions data was not available the time of the review.

Asset loss

- *Direct livestock losses*

Livestock are among the most important financial assets for rural households in highland Ethiopia, and the main financial asset for pastoralists in the lowlands. During drought, livestock mortality increases due to starvation and/or dehydration. Accurate data on livestock mortality during drought is difficult to collect and verify, especially excess mortality relative to a normal year. The following figures are indicative: Amhara Region, 64,685 animals[9]; Tigray Region 1,600 animals[10]; Afar Region 99,623 animals[11]; Somali Region 224,793 animals.[12] The livelihoods impact of these losses partly depends on the wealth status of the households concerned, and the levels of loss by household; this information is not currently available. For example, a poor household that loses all four of its sheep and goats suffers a relatively more important loss than a wealthy household with 200 sheep and goats that loses 20 animals. Using pre-drought market values, the value of these livestock losses during the drought across the four regions would be approximately US$71 million, equivalent to about one third of the total value of Ethiopia's formal livestock amd meat exports in 2012/13[13], and excluding livestock drought mortality from Oromia and SNNP.

- *Indirect livestock losses*

It is widely known that one of the main household coping strategies during drought in Ethiopia is the sale of assets such as livestock to meet domestic needs.[14] Such sales were widely reported in humanitarian bulletins and field assessments by JEOPS and AKLDP[15], but not quantified. Again, the impacts will vary by the original wealth status of the households in question; in the absence of external assistance, poorer households will need to sell all of their animals relatively quickly.

Indebtedness

Although precise information is currently lacking, it seems very likely that household debts will be increasing during the drought. A wide range of formal and informal credit and money-lending arrangements exist in rural areas, and more work is needed to understand the level of debts, how this is affecting coping mechanisms, and how it will affect post-drought recovery.[16]

Education

As shown in the timeline in Figure 1, rapid assessments by the Ministry of Education reported that 3 million children in 198 woredas need emergency education support. The 2016 HRD of December 2015 reported 1.29 million children being unable to access education, while also noting that the figure was likely to rise. Loss of assets (see above) limits the capacity of households to pay for school fees and related costs, and migration affects access to schools.

Agricultural production

Field assessments in Amhara, Tigray and Oromia regions in November and December 2015 reported widespread reduction in *meher* crop yields, followed by replanting, but again failure

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[9] Abenet, F. and Hadgu, K. (2016). LEGS Training in Amhara and Tigray Regions. USAID AKLDP, Addis Ababa

[10] Abenet, F. and Hadgu, K. (2016), ibid

[11] RLP field assessment, February 2016

[12] RLP field assessment, February 2016

[13] Ethiopia livestock and meat export figures from: Aklilu, Y. and Catley, A. (2014), Pastoral Livestock Trade and Growth in Ethiopia. Policy Brief 72, Future Agricultures Consoritum http://www.future-agricultures.org/publications/research-and-analysis/policy-briefs/1880-pastoral-livestock-trade-and-growth-in-ethiopia/file accessed March 2016

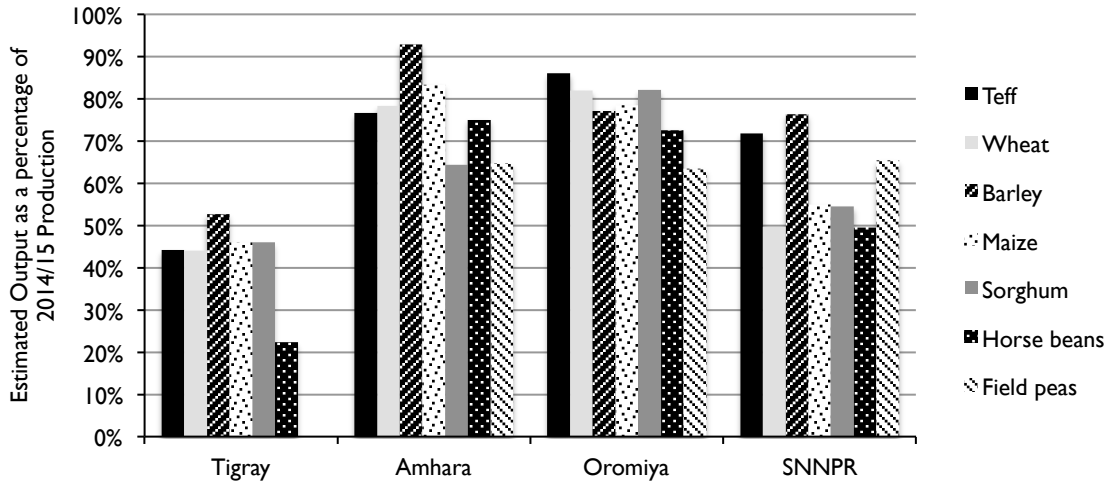
[14] For example, see CSA/WFP (2014), ibid; Pankhurst, A. and Bevan, P. (2004). Hunger, Poverty and 'Famine' in Ethiopia: Some Evidence from Twenty Rural Sites in Amhara, Tigray, Oromiya and SNNP Regions http://www.eldis.org/vfile/upload/1/document/0708/DOC16584.pdf accessed March 2016

[15] http://www.agri-learning-ethiopia.org

[16] The AKLDP has a review of indebtedness in its current workplan.

of replanted crops[17]. A cycle of planting and replanting was also reported in March 2016 from Amhara, Tigray, Oromia and SNNP, with the combination of reduced planted areas and lower yields lowering production relative to 2014/15 (Figure 3).

Figure 3. Farmer's production estimates in 2015/16 relative to 2014/15[18]



Note that averages are presented in Figure 3. Some farmers will have experienced complete crop failures whereas others had reasonably good production. For poorer farmers with very small plots, even good production in a normal year is insufficient to meet household food needs.

Food prices

The AKLDP has produced a series of Food Price Briefs showing the price trends for wheat, teff, maize, sorghum and pulses during the drought.[19] Some key points are provided below.

- Wheat – a relatively stable trend for wheat prices, with some recent falls in price due to the variable quality of the 2015 harvest and substantial imports by the Government of Ethiopia and development partners.
- Teff – a price increase of 28 per cent in February 2016 relative to February 2015.
- Maize – a price increase of 10 per cent and rising in February 2016 relative to February 2015.
- Sorghum – February 2016 year-on-year price increase of 27 per cent.
- Pulses - February 2016 year-on-year price increases were chickpeas 86 per cent, lentils 62 per cent, horse beans 45 per cent and field peas 40 per cent. Note that pulses are an important source of dietary protein, especially when livestock products are not available or not affordable.

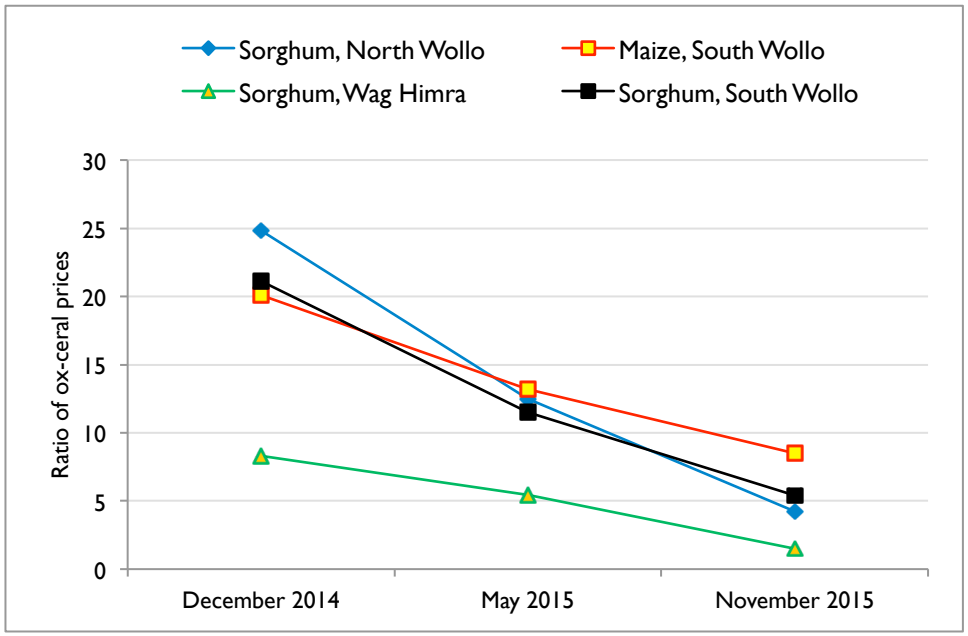
The figures above are national trends, and cereal and pulse increases were relatively higher in drought-affected areas.[22]

In terms of household purchasing power, the terms of trade between cereals and livestock are important. The current drought shows a typical increase in cereal (and pulse) prices with a corresponding decrease in livestock prices, and AKLDP Field Notes from drought-affected areas of Amhara, Tigray and Oromia demonstrate this.[22] An example from Amhara Region is

[17] http://www.agri-learning-ethiopia.org/el-nino-impacts-in-ethiopia-farmers-perspectives/ accessed March 2016
[18] USAID (2016). Assessment of Meher 2015/16 Crop Production, Market Function and Implications for Food Security in Calendar Year 2016. USAID, Addis Ababa
[19] http://www.agri-learning-ethiopia.org/el-nino-impacts-in-ethiopia-farmers-perspectives/ accessed March 2016

shown in Figure 4.

Figure 4. Oxen-cereal terms of trade, Amhara Region[20]



Daily wage rates

Many poor rural households in Ethiopia are dependent on seasonal employment on larger farms e.g. for weeding, harvesting and land preparation. However, opportunities for seasonal work were much reduced in 2015 and early 2016 due to the poor rainfall also affecting these larger farms. Even when seasonal work was available, the normal daily wage rate was reduced due to the increased demand for work. Examples are provided below.[21]

- Amhara Region - the normal daily wage rate of around Eth birr 50 (about US$2) fell by up to 50 per cent.
- South Tigray - daily wage rates fell to around Eth Birr 50 to 80 (US$2.5 to 4) per day – or together with lunch and dinner for the labourer - to Eth Birr 25 (US$1). Wage rates on larger commercial farms in Raya Azebo and Alamata woredas fell from to Eth Birr 100 (US$5) per day to Eth Birr 50 to 60 (US$2.5).
- Oromia Region - a 50 per cent reduction in wage rates from between Eth Birr 70-100 in 2014 to less than Eth Birr 30 (US$1.2) in 2015.

In all three areas above, large numbers of young people were reported to have moved to urban centers, or in some cases, migrated to Somaliland, Djibouti and Middle East countries.

Impacts on business

The drought will have negative impacts on a wide range of suppliers of agricultural inputs and services. Discussions with USAID implementing partners indicates that agri-dealers and other agriculture sector service providers have been hard hit, with considerable reduction in sales of animal feed, seeds, tools, equipment and services.

[20] http://www.agri-learning-ethiopia.org/wp-content/uploads/2016/01/AKLDP-Field-Notes-Amhara-Jan-2016.pdf accessed February 2016.

[21] See AKLDP Field Notes for further details http://www.agri-learning-ethiopia.org/el-nino-impacts-in-ethiopia-farmers-perspectives/

2.2 Drought responses in Ethiopia

2.2.1 Emerging positive lessons

Government responses

The Government of Ethiopia responded relatively quickly to the drought and was widely noted for its strong leadership around the crisis. Examples of early response included water trucking in parts of the highlands and Afar Region in March 2015 as the *belg* and *sugum* rains were failing. Local early warning systems at regional levels then promoted responses such as increases in food relief from July 2015. In Amhara, food aid increased from 639,876 to 2.29 million recipients in July 2015, and in Tigray, it increased from 290,000 to nearly 800,000 recipients.

The 2016 HRD reports that government funds of US$200 million had been used during 2015, with a first instalment of US$97 million committed for food distributions in early 2016. By mid-March 2016, unconfirmed reports indicated that the government's total commitment for 2015 and 2016 had reached US$380 million. Some informants attributed this commitment to savings from government development programs due to falling global oil prices, and a reallocation of these savings to emergency support. Total oil-related savings were thought to be US$500 million to US$700 million. The Government of Ethiopia also worked effectively with the UN to update the HRD during 2015, and release the 2016 HRD in mid-December, as well as conducting a rapid pre-*meher* assessment in October.

These responses took place against a political backdrop of national elections in June 2015, the global Finance for Development conference in Addis Ababa in July 2015, and a visit by US President Obama to Ethiopia in late July 2015. Therefore, the government was responding to an evolving drought within a context of high-level narratives around growth in Ethiopia's agricultural sector and wider economy.

Flexible funding, crisis modifiers and contingencies

One of the main lessons from drought response during 2015 was the more widespread use of various flexible funding mechanisms within long-term development and resilience budgets and programs, as a means to support drought response. Some examples include:

- CARE/PRIME, Afar Region – CARE implements activities in parts of Afar Region under the USAID-funded PRIME project. Discussions with OFDA in January 2015 led to an understanding that a crisis modifier[22] might needed if the spring rains failed. A crisis modifier was then activated in May 2015, with livestock feed and fodder distribution provided to 7,000 households in four woredas in June 2015. At the time, OFDA and USAID in Addis Ababa regarded this as a textbook example of how the crisis modifier should be used. The support was then re-assessed and later extended with further livestock feed distributions in mid-October 2015. This additional support was also a crisis modifier, but was extended to include Mercy Corps livestock feed in Sitti Zone (Somali Region). As the amount available under the crisis modifier had already been used, OFDA shifted funds away from another longer-term resilience program to enable this later crisis modifier.

- In GRAD a crisis modifier was activated three times:

[22] In Ethiopia, crisis modifiers in USAID development assistance projects involve a pre-arrangement with OFDA that OFDA funds can be used for emergencies. PRIME had a budget of US$53 million and the crisis modifier was set at US$1 million per year and $0.5 million per crisis modifier/event.

- In July 2015, US$143,761 of OFDA funds were provided to GRAD for seed and livestock activities in Guraghe zone of SNNP following failed *belg* rains (seed activities were postponed until early 2016 due to poor *meher* rains in the area, also demonstrating flexibility)
- In December 2015, US$249,715 was activated and provided through CARE to implementing partner REST in the Southern Zone of Tigray Region for livestock support
- In January-February, US$249,191 was provided for seed and livestock activities in Sidama zone of SNNP region, for implementation by CARE.

- By February 2016 USAID had reprogrammed US$10 million of Feed The Future and water resources to respond to drought conditions through regular development activities; the model was similar to the OFDA crisis modifier but gave the Mission more flexibility to respond quicker and at larger scale than through the traditional crisis modifier; this indicated that key lessons had been internalized related to flexible funding

- Using a crisis modifier in an ECHO-funded project, VSF Germany started a livestock feed activity in mid-August 2015 in three woredas in Afar Region

- Save the Children introduced a crisis modifier into the DFID-funded Peace for Development Project in Somali Region as a means to provide emergency education support.

- In July 2015 DFID re-allocated approximately US$185 million towards emergency response, focusing on funding to the UN Humanitarian Response Fund, WASH projects under UNICEF, and the PSNP.

- The EU 'front loaded' approximately US$68 million to the PSNP, with around $US44 million released in December 2015, for use in 2016.

- Under its main nutrition program with UNICEF, the EU approved a shift of around US$11.2 million towards therapeutic feeding programs.

These examples reflect a mix of in-built flexibility and responsiveness to the emergency within some development or resilience projects or budgets. In general, when this took place the responses were quicker than typical humanitarian projects. However, the main caveat is that the provision of funds and relatively rapid response does not necessarily translate into impact on the ground. Projects have to be well designed, implemented efficiently, and coordinated. They also have to provide assistance to the point when they are no longer needed. Impact assessments and evaluations towards the end of the drought or soon afterwards will be important for understanding the actual livelihoods impacts and cost effectiveness of activities under these flexible funding arrangements. This work should also include assessment of crisis modifiers given the severity of the drought, the funding caps on USAID/OFDA crisis modifiers, and the need to coordinate crisis modifiers with 'traditional' and more substantive OFDA funds.

<u>Donor commitments to the 2016 HRD</u>
Strong collaboration between the UN and Government of Ethiopia led to the timely release and promotion of the 2016 HRD in mid-December 2015. Up to that point there had been different messaging around that drought and variable early warning reports, probably contributing to some slow donor responses. However, by mid March 2016 the level of donor commitments had reached approximately 53 per cent of the total appeal amount of $US 1.4 billion i.e. within three months of the appeal being launched. This level of funding, in

terms of the proportion of funds committed against the total appeal amount, was consistent with other recent large-scale humanitarian appeals e.g. for Syria, Yemen and South Sudan. Furthermore, and as we discuss in the following section, there are concerns over whether some current programs are being designed well, implemented efficiently, and fall within strong coordination mechanisms. Where there are substantial weaknesses, additional funding alone is unlikely to solve these problems.

2.2.2 Concerns and emerging issues

Coordination

At least four main concerns with the coordination of the drought response were evident.

- A number of informants reported concerns over the post-election restructuring of the Disaster Risk Management and Food Security Sector (DRMFSS) and the effect this was having on the coordination of food aid delivery, and coordination between relief food provision and the PSNP. Up to June 2015 the DRMFSS was positioned in the Ministry of Agriculture and handled both food aid and the PSNP. The restructuring led to an upgrading of the DRMFSS into a new National Disaster Risk Management Coordination Commission, with responsibilities including coordination of disaster response across all government sectors, and food distribution and logistics. However, responsibility for the PSNP remained in the Ministry of Agriculture (renamed after the election to the Ministry of Agriculture and Natural Resources).

- Major coordination problems were evident between the PSNP and UN humanitarian system. One perspective was that senior humanitarian actors had a fundamental mistrust of the PSNP and saw it expanding its area of influence to include the provision of humanitarian assistance. Clearly, strong coordination and joint planning is needed between the PSNP and UN during 'normal' periods when PSNP regular transfers will coincide with some level of relief food assistance, and during emergencies when PSNP transfers under the contingency fund or risk financing mechanism need coordination with emergency food aid.

- Related to the two issues above is the purchase of food in Ethiopia by at least six main bodies or programs viz. the Strategic Grain Reserve (SGR), PSNP, WFP, USAID Development Food Assistance Program, USAID Joint Emergency Operation (JEOP), and the Ethiopian Grain Trade Enterprise (EGTE). While the EGTE is always likely to have its own independent pipeline for food procurement, there needs to be strong coordination and a single plan across the other five bodies and programs. Related to this need were limitations in real-time analysis and updating of national food procurement and importation needs against the HRD, and a need to plan and harmonize efforts against a set of growing storage and logistics issues, and the capacity of the Djibouti port.

- At the level of UN coordination, the role of UNOCHA was valued in areas such as the release of the 2016 HRD with the Government of Ethiopia in December 2016. However, other messaging was criticized. For example, the BBC news item on the Ethiopia drought[23], televised in November 2015 and facilitated by the UN, drew references to the famine in 1984 and was seen as counter-productive. Similarly, UN reports of a slow or insufficient donor response has some justification but these were countered by donor concerns over UN coordination, especially at cluster level in sectors such as health, agriculture, WASH and food/TSF management. In

[23] http://www.bbc.co.uk/news/world-africa-34783604

general, non-UN informants felt that the UN humanitarian system was over-stretched with concurrent crises in Syria and elsewhere, and unable to provide the necessary technical and coordination support to Ethiopia.

- Looking specifically at agriculture, there was a clear commitment from government and aid agencies in terms of asset protection and in particularly, the protection of livestock assets; the 2016 HRD includes around US$42 million for livestock support. However, to date livestock support has been consistently late and took place after substantial livestock mortality was reported in both lowlands and highlands. In general, livestock interventions such as livestock feed seemed not to follow the good practice described in the Livestock Emergency Guidelines and Standards (LEGS).[24] This problem is already being addressed by a group of practitioners promoting and running LEGS trainings, rather than FAO as the cluster lead. Similarly, the seed provision for the 2016 *belg* rains was weak, although the *belg* rains now seem to be late and erratic. Seed plans for the summer *meher* seem poorly developed at this stage of the planting cycle.

Resilience and development projects, and emergency response

As noted above, some resilience and development projects responded relatively rapidly to the drought using mechanisms such as crisis modifiers. However, this type of response was not consistent and it was clear that many projects either did not respond or responded far too late. In general, few if any actors were adequately prepared for a major drought affecting Ethiopia, and in particular, a combination of failed *belg* and failed *kiremt* rains across highland areas, with high populations of chronically food insecure farmers. This is reflected in the current concerns over the food pipeline into 2016 due to various resource, procurement. coordination and logistical issues.

Historically, one of the challenges with development projects in drought-prone areas has been the inclusion of drought risk management thinking and activities at the design stage, with some capacity to support emergency response if needed. Hindering this approach has been a mindset among some development managers and coordinators that emergency response is solely the responsibility of humanitarians. Unfortunately, this attitude has carried over into some resilience projects in Ethiopia, despite a key aspect of resilience being the need to better integrate development and relief. To give an example, the use of a crisis modifier by CARE/PRIME in Afar Region in June 2015 illustrates how a resilience project can plan and respond to drought in a pastoralist area. However, in the neighbouring Somali Region that was also affected by the same drought, there seemed to be no corresponding activity by Mercy Corps/PRIME under the same overall program, until four months later in October 2015.

Looking at AMDe and LMD, the risk of a major drought affecting these projects seems not to have been adequately covered during project design or implementation. For example, did the value chain analyses conducted by these projects take account of drought risks and impacts? Did technical or financial support to private sector actors include setbacks due to drought, and how these might be mitigated? Even in PRIME with its crisis modifiers, was there a common understanding across partners of the purpose of the crisis modifiers, the types of activities that were likely to needed, and the triggers and timing of these activities? Was any kind of crisis modifier plan in place at the program level, including involvement of the private sector where relevant? Did the project have staff with experience of drought

[24] Watson, C., Regassa, G. and Kassie, A. (2016). *Rapid Assessment of Organizational Capacity for the Application of LEGS and the National Guidelines for Livestock Relief Interventions in Pastoralist Areas of Ethiopia to Inform the El Niño Response*. USAID/Ethiopia Agriculture Knowledge, Learning, Documentation and Policy Project and Trocaire, Addis Ababa http://www.agri-learning-ethiopia.org/wp-content/uploads/2015/10/LEGS-El-Nino-Ethiopia-2016.pdf

response, or could it draw on emergency staff from elsewhere in the organization?

PSNP during the drought

Background to the PSNP and crisis response
After the famine in Ethiopia in 2002 to 2003, a new national Food Security Programme was developed by the government with an objective of moving away from the country's reliance on emergency food aid. The program included the PSNP and various other food security, agriculture and asset building projects. The PSNP included transfers to chronically food insecure people with a view to preventing asset depletion at the household level during crises, ensure food security and over time, lead to a sufficient levels of assets and income to 'graduate' households out of the program. The PSNP used labor-intensive public works and direct transfers to households, and from 2005 used a 'cash first' principle with a view to strengthening local markets. The program initially targeted five million people in 262 highland woredas, but this increased to eight million people in 2006.

USAID has had a long involvement with the PSNP and from early 2005, funded six international NGOs to guide the implementation of the PSNP in 35 highland woredas. At the same time, USAID also funded the first safety net project in pastoralist areas, the Safety Net Approach for Pastoralists project implemented by Save the Children in three woredas in Somali Region and one woreda in Borana, Oromia Region. Three years later in 2008, the government PSNP started in pastoralist areas and covered 21 woredas in Afar, Oromiya and Somali Regions.

In addition to regular and predictable transfers to food insecure people in normal periods, the PSNP was also designed to respond to crises by drawing on contingency arrangements. This capacity was covered by two main components viz. a contingency fund, and the Risk Financing Mechanism (RFM); the latter was introduced in 2009.

- The contingency fund amounted to 20 per cent of the PSNP's base program cost, with 15 per cent held at the regional level and 5 per cent at woreda level. It was intended to respond rapidly to low-level and unexpected transitory food insecurity among both PSNP and non-PSNP households by providing temporary additional employment/resources through the Public Works and Direct Support to institutional structures.

- The RFM was to be used if the crisis was too great to be handled by the contingency fund, and was, *"…designed to dramatically reduce the typical humanitarian timeline by temporarily extending support to current PSNP clients and new clients with transitory needs"*[25]; the RFM had four main components or 'preconditions' which had to be in place for it to function:
  - Early warning - effective early warning systems in place to indicate the need for a response as early as possible
  - Contingency plans - plans are in place so that when a shock is indicated, key actors in the system have already thought through how they should respond.
  - Contingency financing - resources to be ready and available to avoid the major time delays associated with the appeal process; provision of contingent financing through emergency grants from the World Bank and other donors was expected

[25] Hobson, M. and Campbell, L. (2012). How Ethiopia's Productive Safety Net Programme (PSNP) is responding to the current humanitarian crisis in the Horn. Humanitarian Exchange Magazine, 53, 8-11 http://odihpn.org/magazine/how-ethiopiaper centc2per cent92s-productive-safety-net-programme-psnp-is-responding-to-the-current-humanitarian-crisis-in-the-horn/

- Institutions and capacity - adequate institutional arrangements and capacity need to be in place to allow the pre-prepared plans to be implemented.

In highland areas covered by the PSNP, the contingency fund was used several times at regional level, and the RFM was used once in 2011, with notable improvements in the timeliness of response reported relative to a typical humanitarian appeal. In contrast, a review of the PSNP in pastoralist areas in 2014 reported that the RFM had never been used in these areas and that, *'The under-use of the RFM has particularly serious implications for the lowlands, which are even more exposed than the rest of Ethiopia to drought'*.[26] It also seemed that the contingency funds had not been used, or at least not for the intended purpose, as the limitations of the system in pastoralist regions were:

- Within a given financial year, delayed release of the contingency fund from federal to regional levels, and insufficient time to spend the fund before the end of the year

- Routine use of woreda-level contingency budgets to correct PSNP targeting exclusion errors, leaving little money to deal with emergencies should they arise

- Slow response to emergencies, with triggering by informal reports and communications that supplement the official early warning system.[27]

The PSNP during drought in 2015 and into early 2016
Central to understanding the performance of the PSNP during the drought are the following points:

- The program follows the Ethiopian fiscal year, starting and ending in July each year

- In a normal year, PSNP transfers take place between January and July, with occasional 'slippage' of transfers into August

- The third phase of the PSNP or 'PSNP3' was orginally planned to end in July 2014, but was extended by one year to end in July 2015

- By late 2014 there was a budget shortfall of around US$20 million and so in December 2014 this amount was shifted from the contingency fund into the main program to protect core transfers; there was no RFM in the program going forwards into 2015

- Due to the planned closure of PSNP in July 2015, it was important that all transfers were completed during July with no 'slippage', to allow program close-down according to World Bank procedures.

Moving forwards into PSNP4 from July 2015, important changes to the design of the program and the implications are summarized below.

Contingency fund:

- The contingency fund was reshaped so that 5 per cent remained at woreda level (woredas usually spent this amount) and the remainder was held at federal level, to be programmed with the HRD.

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[26] Behnke R., Desta, S. and Kerven, C. (2014). *Final report on PSNP redesign for lowland Ethiopia*. The World Bank, Addis Ababa
[27] *Ibid.*

- Based on the HRD, the program pulled forwards $16 million from the PSNP4 contingency fund and this was used for cash transfers to drought-affected areas of Tigray, Oromia, Amhara, SNNP, Harari and Dire Dawa in July to September 2015.

- Discussion on the use of a further US$ 50 million of PSNP4 federal contingency fund started in August 2015, and no decisions were reached with the government. Therefore, no PSNP transfers took place between October and December 2015. Also note the restructuring of the DRMFSS after the elections in June, as described above.

- By March 2016, it seemed that the federal PSNP contingency fund would be used for transfer during July-August-September in 2016 (the hunger gap in a normal year).

Direct support:

- The PSNP included a component of Direct Support to people who were not able to enagage in public works e.g. due to age or disability.

- In PSNP4 the intention was to expand the Direct Support from six to 12 months and in theory, this could have started in July 2015.

- However, the approach needed careful targetting and identification of beneficiaries in May-June 2015. Election prevented the targetting exercise, which took place in late 2016.

Regular transfers, 2016:

- Regular transfers under PSNP4 were due to start in January 2016. However, the rate for Public Works transfers was to increase from EB 24 to EB 55 and as of mid-March 2016, approval for the rate change from the Ministry of Agriculry was still pending.

- By mid-March 2016, the January and February regular transfers seemed not to have taken place. There were concerned that transfers for January, February and March, at the revised higher rate, would take place in April and result in market distortions.

For both contingency transfers and regular transfers planned for 2016, coordination with the HRD was limited.

In the drought-affected areas of Afar and Somali regions, local informants reported cessation of regular food transfers in June 2015. As of mid-March 2016, there seemed to be major grey areas around the design of PSNP4 in pastoralist areas, when transfers might start, and how these transfers would be delivered.

Climate analysis and early warning

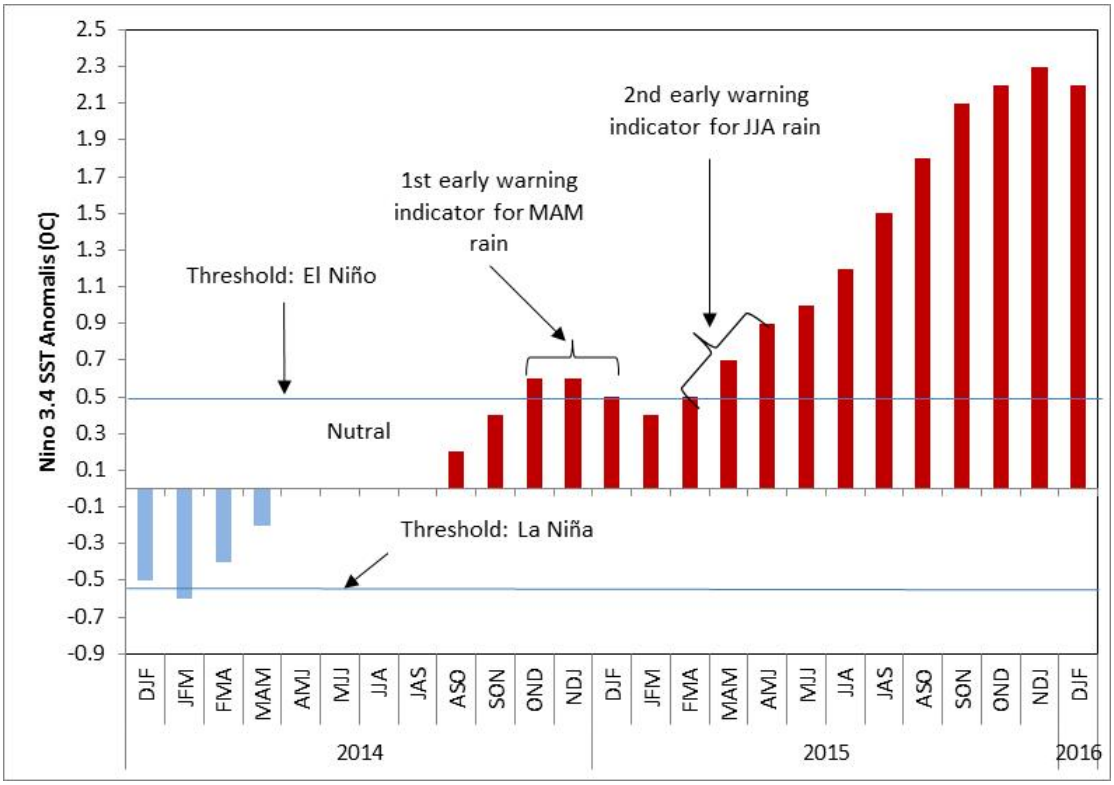
Although climate analysis is subject to uncertainties, the relationship between a strong El Niño event and rainfall patterns in Ethiopia has been known since the 1990s. Specifically, El Niño is associated with delayed, erratic or poor summer *kiremt* rains in Ethiopia, affecting the main *meher* harvest. It follows that in an El Niño year, if the spring *belg* rains start to fail this should prompt alerts of a major crisis due to the risk of both a failed *belg* and failed *kiremt*, and the cumulative effects.

Figure 4 below shows how SST increased above the El Niño threshold in late 2014, dipped below the threshold in early 2015, but then increased steadily from around February

onwards. Therefore, between March and May 2015 there should have been increasing sensitivity to the risk of a major drought; by the end of the May there was both a failed *belg* and a strong El Niño.

Early warning reports often tread a fine line in terms of overstating the risk of drought and facing accusations of scaremongering, versus understating the risks. By mid 2015 it was clear that the Government of Ethiopia, drawing mainly on its own information, was starting to respond to drought with for example, massive increases in food distributions in Amhara and Tigray Regions from July 2015. However, early warning reports from regional and international bodies or networks were not always clear or consistent. For example, the FEWSNET Ethiopia Food Security Outlook for May 2015 does not mention the possibility of El Niño impacts on the *kiremt* rains even though the SST had been above the El Niño threshold since at least February. In May, the Ethiopian government's ENCU had 97 woredas categorized as Priority 1 hotspot woredas, equivalent to IPC Phase 'Humanitarian Emergency'. Similarly, the FEWSNET report of June 2015 makes no mention of possible El Niño impacts on the *kiremt*, despite an even higher SST above the El Niño threshold. It was not until July 2015 that FEWSNET seemed to recognize the El Niño, reporting that, *'According to regional and international forecasts, the June to September Kiremt/Karma/Karan rains are likely to be near average to below average in cumulative amount'* but then neutralizes the message with, *'… in some southwestern parts of the country, cumulative rainfall is expected to be average to above average.'* The report understates the risk of a failed *kiremt* in specific areas, and predicts more-or-less normal conditions with very or poor poor households in high-risk areas moving into IPC Phase 3 (Crisis). In reality, many people were already in ENCU Priority 1 hotspot woredas (Humanitarian Emergency), which increased from 97 in May to 142 in August. It was not until October 2015 that FEWSNET reported that a large-scale *'food security emergency'* was projected – but for 2016.

Figure 4. Overlapping three monthly SST pattern from 2014 to early 2016 showing El Niño (red bars) and La Niña (blue bars)



The regional IGAD Climate Prediction and Applications Centre Monthly Bulletin had some value in describing or predicting climatic events in Ethiopia and the possible consequences. For example, the report of January 2015 mentions above average SST in parts of Indian Ocean and across equatorial Pacific Ocean, but normal or above normal rainfall regionally. However, rising SST was again reported in March 2015, but with no indication of possible impacts on Ethiopia's summer rains. This type of reporting continued until June 2015 but with a note that normal rain was predicted across most of the Ethiopia highlands for July to August. There was no mention of the failed *belg* in Ethiopia to this point.

2.3 LESSONS LEARNED AND RECOMMENDATIONS

The drought is an accumulation of rain failures over time

In common with previous major droughts, the current drought in Ethiopia is due to successive rain failures or weak rains, which in some areas date back to mid-2014. The 2015 failure of the spring *belg* rains in the highlands and lowland *sugum/dirra* rains pre-dated El Niño impacts. The poor summer *kiremt* rains and failed lowland *karma/karan* rains in 2015 were related to El Niño.

Impacts

The impact of the drought is due a mix of the severity of rainfall failures, the geographical spread across diverse and large areas of Ethiopia, and the pre-existing situation of substantial rural populations with high levels of poverty, chronic food insecurity and malnutrition. The 2016 HRD calls for humanitarian assistance for 10.2 million people, in addition to the PSNP coverage. Overall, there were widespread concerns that the drought was leading to rapid depletion of household assets, and could undermine many of the development gains in affected parts of rural Ethiopia in recent years.

Contexts

Various factors affected official recognition of the drought and its impacts. 2015 saw national elections in Ethiopia and a visit by the US President, with elections followed by government reshuffles and restructuring, including the DRMFSS. The PSNP3 ended and the new PSNP4 started, but with changes to aspects of its design and including its contingency fund.

Early warning

Given the context above, the need for clear early warning information was particularly important, especially in terms of the depth of analysis on the emerging El Niño and the possible outcomes on Ethiopia's summer rains. This aspect of early warning was weak. At times there were marked contradictions between early warning reports and for example, the increasing trend in the Priority 1 hotspot woredas. This situation seemed not to prevent responses by government, but did hinder some responses by aid agencies.

Government leadership and response

There was strong government leadership and response, including reallocation of unprecedented levels of government funds towards emergency response, reaching US$380 – 700 million by March 2016. However, government capacity to handle the scale of the emergency was being tested, with many systems and personnel more accustomed to smaller crisies. The restructuring of the DRMFSS resulted in a new layer of coordination challenges.

PSNP

As mentioned above, the PSNP is recognized as contributing to important food security gains before the drought. Although the PSNP4 provided contingency transfers in July to September 2015, no other contingency transfers were made. The regular PSNP4 transfers that were due to start in January 2016 were delayed and may not take place until April 2016; the PSNP transfers will be completed by June but what happens then, including the use the

remaining 2016 contingency, has not been agreed. There is a serious need to clarify what the PSNP will do and when, and how it will coordinate with the HRD.

The PSNP in the lowlands has particular challenges around its basic design and objectives. While these are recognized, there appears to be no clear plan or strategy for redesigning the lowland PSNP. Despite the high levels of food insecurity and vulnerability in the lowlands, the lowland PSNP has constantly lagged behind other areas. There is an urgent need to accelerate the process for strengthening the PSNP in lowland areas.

UN

The UN was recognized for fund raising and working with government to release the 2016 HRD, with high levels of initial coordination and planning. This was countered by messaging that was critical of donors when in fact some donors had responded well and committed e.g. via crisis modifiers and realloccations of development fund. Areas of coordination support were:

- The quality of cluster-level coordination
- Concerns of UN ability to agree priorities with other partners.

Timeliness of responses

A general finding that the development and resilience actors/ programming, and the PSNP, outperformed the UN humanitarian system in terms of the initial timeliness of response. Various types of contingency arrangements, crisis modifers and shifts in development to humanitarian activities and budget were evident, and becoming normal practice. Where resilience programs responded late, this was due to organizational weaknesses and misinterpretions of resilience as not covering humanitarian work.

Long-term strategies

The review points to the limitations of agriculture-focused resilience and development projects, and the PSNP, to build resilience in chronically food insecure rural populations/sub-populations subject to recurrent crises, and in both highlands and lowlands. Increasingly, the long-term role of agriculture as a livelihood for poor households with limited land (highland), decling land access (lowland), and low financial assets (highland and lowland) was questioned by several informants in a context of population growth and agricultural commercialization. A need for more urban investment, job creation and industrialization was recognized.

There were also indications that a radically different approach to drought management and response is possible in Ethiopia, involving far greater use of flexible funding within devlopment projects and programs, more use of government funds.

Immediate needs

The main immediate needs were around coordination and UN capacities. There was a need to strengthen coordination as summarized below.

1. Joint rapid analysis of food pipelines and barriers, and a single plan for food procurement and delivery; USAID has already finalized a food pipeline and market analysis; various logistical issues with food delivery need to be addresssed, some of which are within USAID's manageable interests.
2. Improved quality of UN coordination at specific cluster levels e.g. health, agriculture and WASH. It is assumed that USAID may influence discussion on how best to achieve this.
3. Prioritization of interventions – e.g. general food delivery with full food basket will reduce the number of MAM cases and therefore the number of SAM cases; MAM likely to rise if general food distribution underperforms. It is assumed that USAID may influence discussion on how best to achieve this.

4. Continue to raise funds while recognizing the quality concerns in the design and delivery of emergency assistance across various sectors. This falls within USAID's manageable interests with respect to USAID programs and projects.
5. Overcome coordination issues between HRD and PSNP. As a major actor in the PNSP, it is assumed that USAID can contribute to dialogue and action to improve coordination.
6. Support the redesign of the PSNP in lowland areas. As a major actor in the PNSP it is assumed that USAID can contribute to dialogue and action around the redesign process.
7. Improve coordination between government and donor-supported emergency livelihood responses in the livestock sector. USAID might support this by, for example, seconding a livestock specialist to the government-donor-NGO Agriculture Task Force.

Long-term needs

1. Support further economic analysis to guide development strategies for rural populations affected by chronic vulnerability and food insecurity, focusing on the future feasibility of commercially viable farms (highlands) or herds (lowlands) for substantial numbers of poor farmers and pastoralists, and potentials for off-farm employment and growth of businesses and industry in urban centers. Revisit the notion that in specific populations in rural areas, poverty reduction may be more a case of investment in education and jobs, rather than in agriculture or pastoralism.
2. Recognize the potential of the PSNP to smooth food insecurity gaps, and during crises, provide more timely responses that typical humanitarian assistance. Against this potential are coordination weaknesses that need to be addressed, and the question of sustainability and long-term funding commitments. Also recognize the limitations of the PSNP in terms of meaningful asset buidling.
3. Prioritize the redesign of the PSNP in lowland areas, which is long overdue.
4. Support further evaluation and use of flexible funding arrangements in development and resilience projects, while also ensuring that implementing organizations and project managers have a clear understanding of why these arrangements are in place, and how they will be used. At the design and proposal stage of projects, ensure that draft plans for the use of the crisis modifier are part of the proposal, and ensure that implementing organizations or projects have in-house expertize in emergencies at relevant levels.
5. Continue to support early warning systems but invest in better communication of climate predictions and livelihood scenarios to non-climate scientists.

Annex 1. Drought-affected areas visited

Region/Woreda	Woreda covered by PSNP in 2015-16?	Woreda covered by Feed the Future zone of influence?
Amhara		
Kobo	Yes	Yes
Lagambo	Yes	No
Dese Zuria	Yes	No
Sekota	Yes	Yes
Oromia		
Mieso	Yes	No
Guba Koricha	Yes	No
Kurfa Challe	Yes	Yes
Babile	Yes	No
Fadis	Yes	No
Tigray		
Raya Azebo	Yes	Yes
Raya Alamata	Yes	Yes
Afar		
Amibara	Yes	Yes
Awash Fentale	Yes	Yes
Gewane	Yes	Yes
Somali		
Shinile	Yes	Yes
Mulo	Yes	Yes

Annex 2. Correlation between El Niño/La Niña and drought in Ethiopia

Note – blank cells in the Table indicate limited or no information available in the literature.

ENSO			Drought years in Ethiopia	Areas affected in Ethiopia	Severity	Remark
Years	Episode	Intensity				
1877-78	El Niño	Strong	1876-78	Tigray and Awash Valley	Heavy livestock death tolls	No record of which rainy season failed
			1880	Tigray and Gondar	Much loss of livestock	No record of which rainy season has failed
1886	La Niña	Moderate				
1888-89	El Niño	Moderate	1888-92	Ethiopia	Severe drought overlapped with rinderpest outbreak lead to mortality of more than 90% of the cattle population resulting into famine and human mortality	No record of which rainy season has failed
1889-90	La Niña	Strong	1889-90	Southern Eth.	Drought and Rinderpest outbreak has wiped out cattle population in Borana	
1896-97	El Niño	Strong	1895-96	Ethiopia	Minor drought; loss of livestock and human lives	
1899	El Niño	Weak	1899-00	Ethiopia	Severity unrecorded	
1902-03	El Niño	Weak				
1903-04	La Niña	Strong				
1905-06	El Niño	Strong				
1906-08	La Niña	Strong				
1909-10	La Niña	Strong				
1911-12	El Niño	Strong				
1913-14	El Niño	Moderate	1913-14	Northern Ethiopia	Lowest Nile floods since 1695; grain price said to have risen thirtyfold	
1916-18	La Niña	Strong				
1918-19	El Niño	Strong				
			1920-22	Ethiopia	Moderate drought similar to 1895–96	
1923	El Niño	Moderate				
1924-25	La Niña	Moderate				
1925-26	El Niño	Strong				
1928-29	La Niña	Weak				
1932	El Niño	Moderate	1932-34	Ethiopia	Deduced from low level of water in Lake Rudolf in northern Kenya	
1938-39	La Niña	Strong				
1939-41	El Niño	Strong				
1946-47	El Niño	Moderate				
1949-51	La Niña	Strong	1951	Southern Ethiopia	Severe drought that forced the Borana herders to sell hides and skins for the first time	According to local oral history the drought is associated with failure of both the main (MAM) and short (SON) rains
1951	El Niño	Weak				
1953	El Niño	Weak	1953	Wello and Tigrai	Severity unrecorded	
1954-56	La Niña	Strong				
1957-59	El Niño	Strong	1957-58	Wello and Tigri	Rain failure in 1957, accompanied by locusts and epidemic in 1958	
1963	El Niño	Weak	1962-63	Western Ethiopia	Very severe	
1964-65	La Niña	Moderate	1964- 65	Ethiopia as a whole	Severity unrecorded but suggested to be worse than the 1973/74 drought	Correlated with La Niña
1965-66	El Niño	Moderate	1965-66	Wello and Tigri	Mortality of 197,350 livestock	Failure of both *Belg* (March-April) and *Kiremt* (JJA) accompanied by high

ENSO			Drought years in Ethiopia	Areas affected in Ethiopia	Severity	Remark
Years	Episode	Intensity				
						temperature
1968-70	El Niño	Moderate	1969	Eritrea but drought was not reported in Ethiopia	Severe drought affecting about 1.7 million people	
1970-71	La Niña	Moderate	1971-73	Southern Ethiopia		
1972-73	El Niño	Strong	1973-74	Tigrai and Wello	An estimated quarter million dead and 50 percent of livestock lost in	A sequence of rain failures
1973-76	La Niña	Strong	1973-74	Southern Eth.		
1976-77	El Niño	Weak	1976-78	Northern and eastern Ethiopia		
1977-78	El Niño	Weak				
			1978-79	Southern Ethiopia	Severity unrecorded	Failure of Belg rain but not correlated with La Niña
1979-80	El Niño	Weak				
1982-83	El Niño	Strong	1982	Northern Ethiopia	Crop failed	Delay of Kiremt rain by two months, correlated with El Niño
1983-84	La Niña	Weak	1983-84	Southern Ethiopia	90% of calves, 45% of cows and 22% of mature males between; according other reports this accounts to 56% of the total population	Sequences of rain failure starting from 1983 both the main (MAM) and the short (SON) rains, followed by the same in 1984 but lower magnitude of severity than in 1983
1984-85	La Niña	Weak	1984-85	Southern Ethiopia	Southern Ethiopia: Mortality of 37% of the cattle population	The poor rain condition in 1984 extended to 1985 with particularly the short rain (SON) failed across the region
			1984-85	Northern, northwestern and eastern	Disturbance of cropping activities and pattern because of altered rainfall pattern (see in the next column) as a result, About 7-8 million people affected, estimated 1 million dead, and many livestock lost Large scale population migration from north to west	Sequential change in seasonal pattern: sever aridity of the dry (Bega) season starting from December 1983 to February 1984, followed by unusual wet spell in May which is normally a short dry season, then early on-set and cessation of the Kiremt rain
1986-88	El Niño	Moderate	1987-88	Ethiopia	About 7 million people affected	
1988-89	La Niña	Strong				
1990-93	El Niño	Strong	1990-92	Northern, eastern, southwestern	Drought accompanied by regional conflicts; estimated 4 to 6.5 million people suffered	Rain filer but there is no report of which season
			1992-93	Southern Ethiopia	Drought accompanied by ethnic conflict resulting into 38% of cattle mortality, and loss of access to market	
1994-95	El Niño	Moderate		Afar		
1995-96	La Niña	Weak	1995-96	Southern Eth.	Cattle death	Below average of the main (MAM) rain and moderately severe drought of the short rainy (SON) season
1997-98	El Niño	Strong				
1998-99	La Niña	Strong	1998-01	Southern Eth.	Moderately severe to sever drought Mortality of 53% to 60% of cattle in southern Ethiopia, and overall 4,900,000 affected	Sequence of below average of the main rain (MAM) and failure of the short (SON) rain
1999-00	La Niña	Moderate				
2000-01	La Niña	Weak				
2002-03	El Niño	Moderate	2002-03	Ethiopia	11.3 million people required food assistance; additional 3 million needed close monitoring	
2004-05	El Niño	Weak				

ENSO			Drought years in Ethiopia	Areas affected in Ethiopia	Severity	Remark
Years	**Episode**	**Intensity**				
2006-07	El Niño	Weak	2006-07	Southern Eth.		
2007-08	La Niña	Moderate	2007-08	Southern Eth	6.4 million people were affected	
2009-10	El Niño	Moderate	2009-10	Southern Eth.		
2010-11	La Niña	Moderate	2010-11	Southern Eth.		
2011-12	La Niña	Weak				
2015-16	El Niño	Strong	2015-16	Afar and Sitii zone of Somali region		

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Note:

Historical records show that drought in Ethiopia goes back to 253 BC but the Table includes events since 1876-78 because records of El Niño and La Niña events started from this period.