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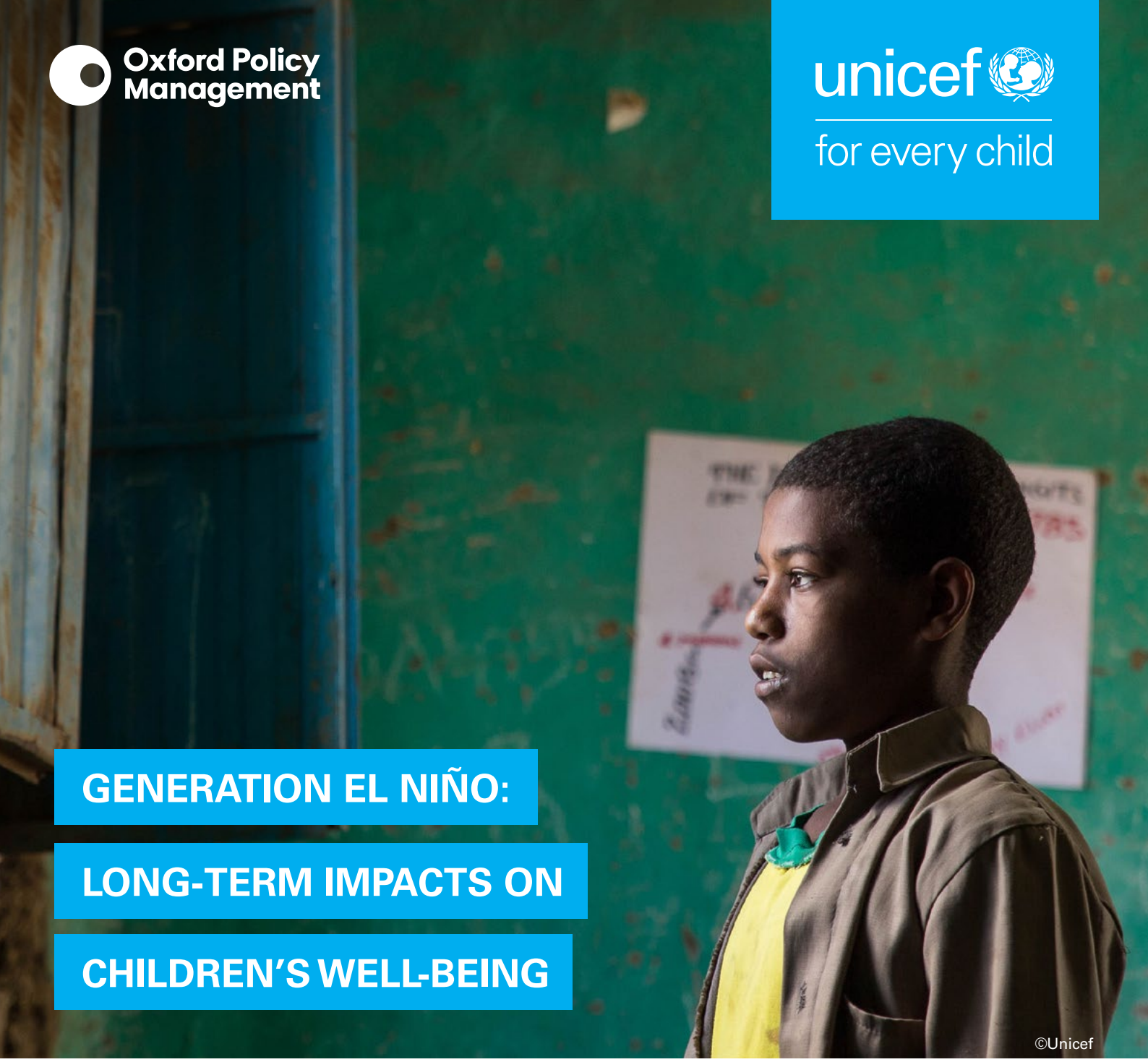

GENERATION EL NIÑO: LONG-TERM IMPACTS ON CHILDREN'S WELL-BEING

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Final Report

IN ASSOCIATION WITH:

HESPI
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The research was undertaken by Oxford Policy Management (OPM), based in the UK, in partnership with The Horn Economic and Social Policy Institute (HESPI), based in Addis Ababa. The core team of researchers comprised Terry Roopnaraine (team leader), Felicity Le Quesne, Lilli Loveday (project manager), Fredu Nega Tegebu, Amdissa Teshome, Gashaw Tsegaye Ayele, and Edris Seid. The internal quality assurance panel comprised Angela Raven Roberts, Zoe Scott, and Sebastian Silva Leander. The field researchers undertaking the data collection activities comprised Fikret Adugna (Amhara), Alebachew Asfaw (Amhara, Southern Nations, Nationalities, and Peoples (SNNPR)), Berhanu Assefa (Oromia, SNNPR), Tsegazaeb Kidanemariam (Tigray, Afar), Hayalu Miruts (Tigray, Afar), and Zinash Muluneh (Oromia).

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The opinions expressed in the report are the sole responsibility of the research team, as well as any errors that remain. We trust that we have accurately conveyed the impressions shared and observations made during the data collection process.

This assessment was carried out by Oxford Policy Management (OPM) and the Horn Economic and Social Policy Institute (HESPI). The Project Manager was Lilli Loveday (OPM), the Team Leader was Terry Roopnaraine (OPM) and the Lead Researcher at HESPI was Fredu Nega Tegebu. This report was authored by Felicity Le Quesne, Lilli Loveday, Terry Roopnaraine, Fredu Nega Tegebu and Amdissa Teshome, with inputs from the wider research and quality assurance team.

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List of abbreviations

ACSI	Amhara Credit and Savings Institute
CCC	Community Care Coalition
CLT	Critical livestock threshold
DRM	Disaster risk management
E.C.	Ethiopian calendar
ENSO	El Niño Southern Oscillation
ETB	Ethiopian Birr
EWRD	Early Warning and Response Directorate
FAO	United Nations Food and Agriculture Organisation
FEWSNET	Famine Early Warning Systems Network
FGD	Focus group discussion
G.C.	Gregorian calendar
GDP	Gross domestic product
GOE	Government of Ethiopia
GRAD	Graduating Out of Social Assistance and Into Long-Term Food Security (programme)
HESPI	Horn Economic and Social Policy Institute
HHCS	Household case study
HRD	Humanitarian Requirements Document
IMAM	Integrated management of acute malnutrition
INGO	International non-governmental organisation
KII	Key informant interview
LSMS-ESS	Living Standards Measurement Study – Ethiopia Socioeconomic Survey
MoWCA	Ministry of Women's and Children's Affairs
MUAC	Mid-upper arm circumference
NDRMC	National Disaster Risk Management Commission
NGO	Non-governmental Organisation
OPM	Oxford Policy Management
PCDP	Pastoralist Community Development Programme
PPVT	Peabody Picture Vocabulary Test
PSNP	Productive Safety Net Programme
SNNPR	Southern Nations, Nationalities, and Peoples Region
UN	United Nations
UNICEF	United Nations Children's Fund
UNOCHA	United Nations Office for the Coordination of Humanitarian Affairs
USAID	United States Agency for International Development
WASH	Water, sanitation, and health

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Executive summary

Overview

The 2015-16 El Niño episode caused drought across large parts of eastern, southern, and central Ethiopia. Failed *belg* and delayed/erratic *kiremt* rains caused acute and widespread crop failure, asset depletion, and food insecurity. Children were amongst the most vulnerable to the 2015-16 El Niño drought, and their well-being was affected across numerous indicators. The episode was neither unfamiliar, nor unpredictable, being a severe iteration of a natural climatic phenomenon affecting Ethiopia and the wider Horn of Africa. In general, Ethiopia experiences significant variability in rainfall, and research suggests that the country is experiencing further warming trends driven by climate change[1]. These characteristics and trends point towards a likelihood of recurrent drought in future decades, badly afflicting certain parts of the country whose populations are dependent on rain-fed agriculture and/or pastoralist ways of life. Persistent drought episodes will place millions of children at risk in terms of their long-term well-being and future development. To place children on positive, long-term development trajectories, it is critical to ensure children's needs and aspirations are integrated within a clear strategic framework of resilience building that provides a shared reference point for humanitarian and development efforts.

A long-term perspective: children's well-being and resilience

Whilst a number of rapid assessments have been undertaken of the drought response more broadly, as well as of the immediate impacts of the drought on children, until now there has not been a study that has focused explicitly on how the drought is likely to impact on children in a holistic sense and with a long-term perspective. A long-term focus is important since children's well-being not only matters in the "now" but also for their "well-becoming" into adulthood. Irreversible capability failures later in life, and dependency in adulthood[2], can be influenced by experiences in childhood (such as acute or chronic malnutrition, violence, and erratic school attendance). At the same time, childhood represents a life stage at which children's future capabilities can evolve in different ways – for example, through childhood learning/skills development.[3]

Whilst acknowledging the challenges of measuring long-term impacts, and accurately attributing them to the 2015/16 El Niño drought, this study seeks to address evidence gaps by exploring the relationship between the immediate impacts of the drought on children, the coping strategies adopted by households in response to those impacts, and – along with broader external factors and interventions – how these are likely to influence long-term well-being. Framed by an approach to understanding well-being that is embedded in the capabilities approach, as well as linking this to the concept of resilience, the study synthesises data captured across five regions of Ethiopia (Afar, Amhara, Oromia, Southern Nations, Nationalities, and Peoples (SNNN), and Tigray). The data collected via a series of household case studies (HHCSs) and focus groups discussions (FGDs) with adults and children (aged between seven and 18), as well as key informant interviews (KIIs) at community, regional and federal levels, is complemented by secondary literature analysis (including on adaptation, resilience, and drought-related impacts).

Children at the fore of immediate impacts

Despite an unprecedented humanitarian response, children's well-being was clearly compromised as a short-term result of the drought. Crop failure resulted in an immediate reduction in the amount of self-cultivated foods and income earned from selling cash crops in agricultural and agro-pastoralist *kebeles*, and lack of animal feed in pastoralist and agro-pastoralist *kebeles*. The frequency, size, and dietary diversity of meals was affected – with chronic hunger impacting on children's attendance and performance at school. Children (between seven and 12 years) in Tigray stated: "*we had hunger every day*", and there were reports of critical nutritional outcomes across Ethiopia's eastern, central, and southern regions. Livestock herds were sharply reduced through death and destocking. There were major impacts on water availability for domestic use, as water sources (natural and piped) dried up. Reduced water availability caused thirst, as well as dry, cracked, and itchy skin conditions.

Saving lives, but not livelihoods: cycles of livelihoods decline

Livestock feed distribution and other livelihood interventions mitigated against herd depletion, while food aid mechanisms (such as school feeding and provision of oil/grain) mitigated against acute food security crises. Delays in full scale-up and delivery of the

[1] US Geological Survey and US Agency for International Development (USAID), 2012.
[2] Tafere, Y. and Woldehanna, T., 2012.
[3] Commim, F. et al., 2011.

humanitarian response (in part related to complex early warning systems, as well as issues of coordination) meant support was often received late, by which time households had already undertaken negative coping strategies. To this day, many households have not been able to recover from the severe drought in 2015–16, and are highly unlikely to be able to absorb future shocks – climatic or otherwise. Indeed, restricted consumption patterns have been retained in some households to cushion against future crises.

A lack of resilience has serious implications for children's long-term well-being. When a household is unable to maintain its livelihoods base, the negative coping strategies undertaken (e.g. migration, child labour, withdrawal from school) can act as long-term threats to familial unity and children's safety, as well as social and human capital. Indeed, in the absence of real resilience, this cycle of declining livelihoods is likely to spiral, leaving households – and especially children – increasingly vulnerable.

Intensified coping: migration, transhumance, and work

In order to deal with the drought, households intensified or transformed existing coping strategies. Coping decisions were influenced by livelihood orientation – as well as being mediated by external factors and interventions. Broadly speaking, the drought increased children's participation in work, with implications for educational attainment and human capital accumulation in the long term.

Increased economic migration (in many cases a long-standing tradition), saw older boys (13–18 years) seeking work in nearby towns, large cities, and the Gulf, and expanded participation of younger boys (7-12). In pastoralist communities, transhumant journeys were undertaken by older boys (13–18 years) and their fathers. Distances travelled in search of water and pasturelands were longer. Water collection increased in duration and distance, with trade-offs in the time use of women and girls, who were also exposed to potential abuse along the route. Migration lasted longer and children were exposed to poor treatment, whilst prolonged absences of mothers and older sisters (fetching water) saw younger children (7–12 years) left at home for longer periods.

Exacerbating deficiencies: capabilities, education, and aspiration

For many children, dreams and aspirations centre on escaping the hardships and grinding realities of *kebele* life, becoming urban-dwellers with white-collar jobs, or training as doctors and teachers and returning to serve their communities in this capacity. Yet, this is articulated alongside sadness, fear, and worry about the future – exacerbated by what drought implies for the decisions households face. Children (7–18 years) express a general sense of disempowerment and lack of agency in determining their future life courses.

Indeed, despite school feeding programmes being implemented and widely reported as being successful in increasing enrolment, immediate impacts and coping strategies have had negative impacts on school attendance and drop-outs, especially among older boys (13–18 years) who often have not re-joined.

In all sites, there is a tradition of girls leaving school prematurely to get married. Drought, in some cases, resulted in the postponement of marriages to avert economic outlay and due to the migration of older boys. Yet, following the drought, early marriage has been resumed, posing a threat to girls' life choices and educational opportunities, with older girls (13–18 years) not returning to school.

Social capital, solidarity, and recovery

Social capital was an important factor in enabling households to cope and/or recover (especially in pastoralist *kebeles*) during and after the 2015-16 El Niño episode. At the same time, social capital is considered to be weakening, due to the strain placed upon mechanisms of reciprocity and trust by shocks and poverty, and as a result of a lack of resources and migration at a community level. Security concerns between clans revolve around conflict and competition over resources, which have increased as a result of the drought.

In agricultural and agro-pastoral *kebeles*, children are increasingly "urban", in terms of their aspirations, attitudes, and activities. This, along with trends of migration and industrialisation, contributes to feelings of social isolation and a perception that traditional networks are dissolving.

Recommendations for policy and programming

It is critical to take a long-term perspective on how to reduce vulnerability and 'drought-proof' human and socioeconomic development. A child-focused perspective should take into account children's particular needs, contexts, developmental trajectories, and aspirations. Bridging the traditional division between 'development' and 'humanitarian' activities, within institutions and policies, can help to improve coordination and efficiency of programming and facilitate learning on the innovations and best practices developed in each (e.g. crisis modifiers). This can provide a context for transformative interventions that save lives and – more fundamentally – build the conditions for sustained well-being and resilience to future crises.

An approach to resilience should be sensitive to the nature of the risks faced and to the dynamic nature of the socioeconomic fabric and trajectories of rural and urban communities, taking account of children's contexts, realities, and perspectives. At the same time, there are important opportunities for further strengthening the delivery of emergency response.

Building resilience to drought (long-term impacts and recovery)

Strengthen institutional and strategic foundations for child-sensitive disaster risk management (DRM). Supporting a paradigm shift towards DRM requires an integrated approach to delivering a cycle of actions from risk prevention and risk reduction through to response and recovery. Pre-arranged systems for financing disaster response are an important element of a DRM strategy, and options such as risk insurance at micro, meso or macro level could be considered within an overall strategy based on risk layering.

Develop a comprehensive strategy for building children's resilience across sectors. Ideally anchored in government and aligned with disaster risk, child-specific, and sectoral strategies, a resilience strategy can provide the framework for development partner alignment. Dialogue which acknowledges the reality of shifting populations and changing landscapes should be used to develop understanding of the implications of resilience for the national policy framework relating to children.

Sectoral considerations include the following:

Nutrition and health: Alignment of nutrition with climate proofing and agricultural interventions, support to the institutionalisation of school feeding (in line with the National School Health Nutrition Strategy), and interventions to support children at key 'nutrition windows' into adolescence should all be incorporated into development planning and budgets.

Education: Promotion of the role schools play as key 'convergence points' for children's well-being during drought, through nutrition, child protection, water, sanitation and hygiene (WASH), education and skills training interventions; encouragement for these interventions to be put in place before drought; support to efforts/advocacy for flexible education – including provision of services away from children's home-bases (recognising migration/transhumance patterns); and support for the provision of school materials.

WASH: Support for interventions that 'drought-proof' water supply, whilst considering the sustainability of the entire water table; awareness raising and support for hygiene and sanitation interventions; and analysis to underline the gender sensitivity of WASH.

Child protection: Support to campaigns that shift norms (e.g. around marriage); advocacy to mainstream child protection across sectoral strategies and interventions, as well as to close the gap in terms of considering livelihoods, resilience and child protection; strengthening of local institutions and community-based mechanisms, alongside broader sensitisation, to understand and respond to issues.

Design strategies and interventions that build skills, contacts, and support for youth employment. Industrialisation and increasing urbanisation requires efforts to strengthen the quality of technical and vocational training to equip youth with the skills required to develop secure livelihoods, including links with decent employment and non-formal learning. Furthermore, core skills development from an early age (primary) should support children to find information about the options, requirements, and potential support for their futures.

Support mechanisms that build social capital and strengthen urban and rural social institutions. The importance of social capital for resilience and recovery reinforces the need for non-conventional approaches (e.g. to water management and community savings/loan schemes) that draw on existing social structures but consider a youth population whose outlooks are increasingly urban and open to migration.

Effective delivery of emergency response

Support the National Disaster Risk Management Commission (NDRMC) to act as an effective focal point for coordinating drought response policy and practice, particularly as regards children's needs.

Strengthening the NDRMC's technical and operational capacity and resourcing to allow it to deliver on its institutional mandate would enable the relatively new institution to fulfil its potential. Furthermore, dialogue related to the synergies between Ethiopia's DRM strategy and the 2017 National Children's Policy should be pursued to ensure that the principles are aligned and implemented.

Call for and support improvements to early warning information and systems. Advocate for improving the accuracy of data and data analysis that informs early actions, as well as improving information sharing between stakeholders

Support a transition towards a dynamic approach to needs assessment. A shift towards reliance on needs assessments towards a reliance on real-time information flows to improve time response requires strengthening the link between meteorological forecasts and human and socioeconomic impacts. Whilst in some areas, such as child protection, mechanisms for monitoring are limited or non-existent, there are important lessons to be learnt from sectors such as health. Ensuring systems are sensitive to drought and child-specific needs should involve the training of monitoring specialists, including on what types of data are critical to understand the situation of children.

Support continued efforts to identify and improve the logistics of response efforts, particularly in areas that are critical to child well-being. Delayed response can have significant impacts on children's well-being, with potential lasting impacts on children's development prospects. There is potential to leverage learning and best practice on delivering humanitarian relief to mitigate impacts, including strengthening understanding of opportunities for decentralised logistics, in recognition of the contributions of actors at different scales. Support for dialogue between coordination clusters can provide a forum for identifying and resolving logistical issues.

Explore innovations in programme design as a means of improving early response to drought. One way to improve early response is through programme design – through mechanisms such as 'crisis modifiers'. Expectations of the potential for these mechanisms to enable rapid funding of response activities should be supported by evidence building and the provision of ongoing training for programme staff.

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1 Introduction

1.1 Background

In 2015, the occurrence of an El Niño episode caused (or, in some regions, deepened) drought across large parts of eastern, southern, and central Ethiopia. The El Niño episode was linked to failed *belg* rains and delayed, erratic *kiremt* rains, and caused widespread crop failure, asset depletion, and food insecurity. The humanitarian crisis continued into 2016, with an additional 10.2 million people requiring immediate food assistance and emergency relief in that year. The impacts of the drought, and the humanitarian emergency that it stimulated, continue to linger and unfold in the affected regions.

While a number of rapid assessments of the El Niño impacts and the efficacy of the humanitarian response have been commissioned by donors[4], no study has yet been commissioned that focuses explicitly on the impacts of the drought on child well-being in a holistic sense, and with a long-term perspective. Such a study should be situated within the context of previous research showing that persistent lack of rainfall and drought could place millions of children 'at risk' in terms of their long-term well-being and future development[5]. Rapid assessments of the situation in 2015, including of child protection issues (undertaken by regional bureaus) and a rapid gender analysis report (undertaken by Care) suggested that well-being was being compromised across numerous indicators, and particularly that of children in the poorest wealth quintile households.[6]

In this context, UNICEF Ethiopia commissioned a research project entitled 'Generation El Niño: Long-Term Impact on Children's Well-being'. The purpose is to build the evidence base on the impacts that droughts have on child well-being, particularly with a view to informing policy and programming. The research was undertaken between April and December 2017 by OPM and HESPI.

1.2 Research overview

Existing research has considered impacts on drought and well-being from many perspectives, including poverty analysis, social protection, disaster risk reduction, institutional economics, environmental governance, and financial inclusion[7]. As outlined in Box 1 below, the scope for this study emphasised an assessment of drought impacts on child well-being in the short- and in the longer-term; the types of coping mechanisms that are deployed by households in the context of drought, and their impact on child well-being; as well as the types of external assistance that were provided, and their efficacy in mitigating impacts – particularly for children.

Children are defined as all individuals under the age of 18, in line with the United Nations Convention on the Rights of the Child and the Ethiopian Family Code, which defines 18 as the age of majority. In understanding the impacts of the drought, the research takes account of the diverse range of experiences/expectations/lifestyles etc. encompassed in an age range of 0–18 years, both in the design and in the analysis. In line with this, though acknowledging that groupings still reflect a diverse set of experiences, the research engaged with two distinct age categories of children directly – '*younger children*' (aged 7–12) and *'older children'* (aged 13–18)[8]. Well-being is considered in terms of capabilities – taking account of subjective factors to consider how both material and non-material resources impact on the lives children live[9]. Considering well-being in this way is valuable in the context of this study on longer-term impacts, taking account of the fact that what happens now matters for children's 'well-becoming' (i.e. their future capabilities and well-being into adulthood)[10]. It considers well-being in the context of resilience – in that resilience (and the capacity to 'anticipate, absorb, and adapt to shocks') describes a quality which would mediate the impacts of climate shocks on well-being into the future.

The study provides recommendations for UNICEF, and more broadly for policymakers and programmers in the area of humanitarian aid and climate resilience, that are intended to move communities onto a trajectory

[4] Including, for example, a study commissioned by the UK Department for International Development on early emergency response and resilience investments (Valid Evaluations, 2017); a lessons learned report led by the United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA) on the El Niño response (Senior Transformative Agenda Implementation Team, 2016); a real-time review of responses commissioned by USAID (USAID, 2016a); and an analysis of early warning and response systems commissioned by the Early Warning and Response Directorate (EWRD) (EWRD, Ministry of Agriculture, GOE, 2016).
[5] UNICEF, 2013a
[6] Regional Bureaus of Women and Children's Affairs (Amhara, Oromia, Afar, Somali), 2015; Care, 2016.
[7] Such as: Alderman, H., 2011; Dercon, S., and Porter, C., 2010; and World Bank, 1998.
[8] See methodology section detailing age groups of children included in primary data collection.
[9] Ibid.
[10] Tafere, Y. and Woldehanna, T., 2012

of greater resilience, with a sustained reduction in the negative impacts of weather shocks upon child well-being.

The objectives of the research fall into two categories:

1) to generate evidence and build understanding on the long-term impacts of the 2015-16 El Niño on households and well-being; and

2) to utilise this evidence to inform programming for UNICEF and wider policy decisions for UNICEF's partners in the Government of Ethiopia (GOE), so that their interventions are more effective in reducing or preventing long-term negative impacts on children.

Box 1 Main research questions

1. What were the immediate effects of the 2015-16 El Niño event upon the most vulnerable households and their children's well-being in the affected regions?
2. What were the main coping mechanisms used by the most vulnerable households to respond to the El Niño which could have affected, and did affect, children?
3. What forms of external support were provided to affected households in response to the El Niño event and did they influence children's well-being? How could external support be designed and delivered more effectively?
4. What are the potential long-term impacts of the 2015–16 El Niño event upon the most vulnerable households and their children's well-being in the affected regions?

1.3 Structure of report

Following on from this introduction, which has provided an overview of the context in which the research was undertaken and a summary of the main research components, the report is structured into the following subsections:

In **Section 2** we present the framework that guides the research, which draws together two distinct – but complementary – approaches to considering well-being: 'capabilities' and resilience'. This – along with a definition of long-term impacts and the presentation of sub-research questions – provides the backdrop for understanding how the impacts of drought on children's well-being and vulnerable households has been approached and understood, both in terms of the immediate effects and with a view to the potential long-term impacts.

Section 3 summarises our 'qualitative-driven' methodological approach, sampling strategy, tools used during the primary data collection, and the analytical process, as well as associated challenges (accompanied by Annexes A to C, which present further detail on methods and selected sites/households). Annex D provides the details of people interviewed during the research.

In **Section 4**, drawing on primary and secondary material, we discuss the context of the El Niño drought and how this was manifested across the affected regions (within the context of broader dynamics of climate change), as well as detailing the overall response context, including in terms of the scale and coordination of the humanitarian response (at federal and sub-national levels). This section provides detail against which to interpret the research findings, and also draws together understanding of how the structures surrounding the response influenced how interventions were 'taken up'/experienced by households/children in the study sites (explored in Section 5).

In **Section 5** we present key findings against each of the research questions, drawing principally from primary data for Research Questions 1, 2 and 3, with secondary data supplementing the discussion of Research Question 4. Building from this, **Section 6** looks closely at a set of case studies from across the regions, to explore the research questions – and issues raised in Section 5 – at the household level (the remaining case studies are presented in Annex C).

In **Section 7** we summarise and draw conclusions across the research questions. In **Section 8** we provide a series of recommendations for policy and programming, as well as for future research.

2 A framework for 'well-being': capabilities and resilience

The conceptual framework for this study weaves together two separate, but complementary, approaches. The first is the 'capabilities approach', which provides a nuanced depiction of child well-being, taking account of factors beyond the material factors (e.g. income) which influence children's lives. The second approach is centred on the concept of 'resilience' to climate shocks and stressors, which describes a quality that would mitigate the impacts of drought on child well-being.

2.1 Capabilities approach

Whilst research considering well-being often emphasises factors that lend themselves to policy/programming (e.g. housing, water, education), there is value in exploring subjective and self-assessed indicators in order to unpack issues and understand how resources (material and non-material) impact on lives that are actually lived. This also takes account of various dynamics that mediate/influence well-being. In view of this, the research adopts a conceptual framework for well-being which draws from the capabilities approach – developed by Amartya Sen and Martha Nussbaum. The capabilities approach considers three components – functionings, capabilities, and agency – and is not restricted to material aspects of life, but also takes account of the '*conditions, possibilities, and abilities*' that people require to achieve a '*good life*'[11]. (See Box 2 below.)

Indeed, especially for children, whose capabilities are changing and dynamic, childhood represents a '*stage of life in which unique structures and capabilities matter and can evolve in different ways*'[12]. As evidence demonstrates: '*what happens to children often leads to path dependency, and in some cases key capability failures may be irreversible in later life (e.g. stunting)*[13]'. As such, the framework is valuable for considering potential impacts/threats to future well-being since what happens in childhood is intrinsically linked to the capabilities that an adult ends up with (for example, adult talent and skills are critically dependent on childhood learning and experience) [14].

However, children and adolescents are worthy of agency in their own right and evidence also shows that opportunities for children are determined by more than objective indicators. Children's well-being is shaped by dynamics – internal and external – which affect and influence their lived experiences. For example, studies show that a child's status at home can be a more significant indicator of educational attainment than household income alone. Further, in terms of guiding policy and programming recommendations, insights can be gained from children's experiences of drought, the areas of their lives that have been impacted, and their own views of potential responses that might mitigate/improve their situations. It is necessary to be alert to the nuances in those experiences, impacts and views which exist in specific circumstances.

Box 2 Components of the capability approach

Agency takes account of the ability of an individual to lead the life that they value. **Functionings** (the 'being and doing' in the life people lead) are the activities or states that become a person's well-being (healthy body, being educated, having nourishment etc.). **Capabilities** – as the choices or 'freedoms' that people have to carry out the activities/achieve these functioning states – are dependent not only on the individual's external context (social, environmental etc.), but also on their own abilities (skills etc.)[15].

The capability approach takes account of **resources/commodities** and the dynamics which mediate how these are used or converted into functionings – including allocations of resources, non-material or structural barriers (discrimination, cultural/social norms etc.), contextual or physiological differences/conditions, and specific needs (e.g. children's socio-emotional and affective needs). In order words, it explores the various *conversion factors* that determine how commodities/resources are translated into functionings and capabilities, rather than considering the resources/commodities themselves.

2.2 Building resilience to drought

The lens of the capabilities approach for exploring child well-being is characterised by an emphasis on multidimensionality, and in particular its recognition of the subjective elements and dynamic nature of well-being. This lens is highly appropriate for studying well-being in the specific context of climate-related shocks and disasters.

[11] Fegter, S., and Richter, M., 2014.
[12] Comim, F., et al., 2011.
[13] Ibid.
[14] Bigerri, M., 2007.
[15] Kakwani, N., 2006.

Reference to the literature on building resilience to climate change and climate shocks serves to illustrate this point. Whilst the concept of resilience originated in the field of ecology, it is now widely used in the context of development, and refers broadly to: '*the capacity that ensures adverse stressors and shocks do not have long-lasting adverse development consequences*'[16]. Bahadur *et al*. (2015) suggest that it comprises the capacity to *anticipate* shocks, *absorb* shocks and *adapt* to shocks. In the context of this research, resilience can be thought of as a quality that mediates the impacts of climate shocks[17] on socioeconomic systems and human beings.

Like the concepts of capabilities and functions, resilience is inherently multidimensional, comprising subjective, social, and political aspects, as well as material and economic aspects. Subjective considerations that are widely referenced in the resilience literature include what possibilities people have, how much freedom they feel they have to follow those possibilities, what risks they face, how well they feel they can cope with these risks, to whom they can turn for help, and on what terms.

Resilience is also an inherently dynamic concept. Beyond the broad conceptual definition, resilience is not, in practice, a single 'thing', and '*people are resilient to different degrees depending on the threat or risk being discussed and in coping with any problem, people may rely on many different abilities.*[18]' While the building blocks of resilience might be resources and capabilities, the key question is how those things are deployed, and their relationships with one another[19]. Understanding resilience means understanding the strategies that households employ to cope with droughts – and this cannot be understood as a 'modular', or tick-box exercise where the existence of a sufficient number or set of qualities indicates that a household is resilient[20]. This is a similar emphasis to the notion of conversion factors within the capabilities approach: people may have a set of resources available to them, but what is important is how they choose to use those resources.

As discussed above, the capabilities and functionings that children develop are likely to significantly determine the nature of their trajectories through life. Similarly, the capacity of an adult to be resilient to drought will depend to some degree upon whether they developed the necessary capabilities (or potential for those capabilities) as a child.

2.3 Assessing 'long-term impacts'

The conceptual framework outlined above also guides the research in terms of approaching long-term impacts. As the research focuses on a climate event that ended less than three years prior to when the study began, determining its long-term impacts is challenging, especially in the absence of a stable baseline. Taking the average length of a human life (in Ethiopia this is 63 years)[21] as a reference point, it is not possible to look at this period and to state whether the trends or conclusions observed are 'long-term' within the overall scope of a lifetime. Indeed, how long-term impacts actually play out will depend upon future conditions – including, climatic, meteorological, environmental, economic, political, as well as social and cultural conditions – the forecasting of which is beyond the scope of the study.

The research seeks to make projections about how observations made within the period since the end of the drought might play out in the longer term, specifically in terms of children and as they move into adulthood. 'Long-term impacts' are conceptualised as circumstances or processes that can pose *potential threats* to well-being into the future, and in view of children's resilience – and the resilience of the households in which they live.

2.4 Research themes and sub-questions

A set of four research questions have provided the overarching lines of enquiry for the study. Under these four main questions, a set of 'second layer' research questions were developed to explore specific dimensions of interest (see Box 3 below). These sub-questions were informed by the literature review and secondary data analysis, as well as a consideration of how the aspects of agency, functionings, and capabilities can be drawn out and reflected. This process, and the questions themselves, have provided a heuristic tool for formulating data collection instruments for use in fieldwork (see Annex D).

[16] Food Security Information Network, 2014.
[17] Bahadur, A., et al., 2015.
[18] Levine, S., 2014.
[19] Food Security Information Network, 2014.
[20] Levine, S., 2014.
[21] UNICEF, 2013b.

Box 3 Research questions and sub-questions

1. What were the immediate effects of the 2015–6 El Niño event upon the most vulnerable households and their children's well-being in the affected regions?

- How did the impacts of the El Niño event vary according to environmental, socioeconomic and cultural characteristics of villages/ communities?
- How did the impacts of the El Niño event vary according to differences in households, including household composition, livelihood, and assets?
- How was the 2015–6 El Niño event manifested for affected households?
- How did the El Niño event link with broader dynamics of climate and socio-ecological change?
- How did the El Niño event link with broader socioeconomic development dynamics in the area?
- What are communities' perceptions about the reasons for drought?
- What other occurrences could have increased households'/communities' vulnerability during the El Niño event?
- Was household purchasing power affected by price inflation during the period of the El Niño event? How did impacts on purchasing power vary according to households' degrees and types of engagement with markets?

2. What were the main coping mechanisms used by the most vulnerable households to respond to the El Niño which could have affected, and did affect, children?

- What coping mechanisms were employed to mitigate the impacts of the El Niño event upon livelihoods? What factors influenced household decisions regarding which coping mechanisms to deploy?
- What are the asset profiles of affected households, and were assets deployed or affected in response to the El Niño event?
- What are the main components of household expenditure? How did expenditure overall, and its components, shift as a result of the El Niño event?
- What are the main components of household income? How did income overall, and its components, shift as a result of the El Niño event?
- How does household composition influence coping mechanisms, among poor households?
- As a result of the El Niño event, did households get a daughter married earlier or later? What factors influenced this decision and what are the possible implications for the daughter's well-being?
- What factors influenced households' decisions to take children out of school in response to the El Niño-induced weather shocks? Are there certain characteristics of children that made them more likely to be taken out of school (e.g. age, gender, livelihood of household), and what are the reasons for this?
- How did the El Niño event affect child labour, and what factors influenced this (e.g. characteristics of the household and of the child)?
- What factors influenced individuals' decisions to migrate in response to the El Niño event? (e.g. proximity to urban area and roads, livelihood of household and area, education and skills, gender and age, location of family and social networks)
- How did the El Niño event affect household food and water consumption, and intra-household distribution?
- How did customary institutions and social networks influence coping?
- What types of financial coping mechanisms were employed and with what implications for other potential sources of household spending immediately and in the longer term, particularly those affecting children?

3. **What forms of external support were provided to affected households in response to the El Niño event and did they influence children's well-being? How could external support[22] be designed and delivered in a manner that has the greatest impact upon the immediate well-being and future resilience of affected communities?**

- What policies, strategies, and action plans were put in place by the GOE, international organisations and development partners in response to the El Niño event?
- What programmes were operating in response to the drought in the regions in areas related to disaster risk reduction, social protection, livelihoods, and children's well-being?
- What evaluations/reviews have been carried out of these programmes and what do they say about their outcomes and impact?
- What do programme implementers say about the outcomes and impact of these programmes? Are there current areas of prioritisation or bias (sectoral and geographical)? Are there wider constraints on design and delivery?
- What do households (including children's perspectives) say about the appropriateness of these programmes?
- What types of interventions do affected households (including children's perspectives) desire to help them overcome the long-term impacts of the drought?

4. **What are the potential long-term impacts of the 2015–16 El Niño event upon the most vulnerable households and their children's well-being in the affected regions?**

- How do households perceive the overall impact of the drought upon the well-being of their children?
- How is the drought likely to compromise children's educational prospects and future livelihood prospects?
- Have households been able to recover their food and water security?
- What are the long-term impacts upon community well-being, coherence, and customary institutions?
- Is there evidence that child protection has decreased in the face of weather shocks, and, if so, what are the long-term impacts?
- What are the potential long-term impacts on children's physical health?
- What are the potential long-term impacts on children's mental health?
- What are the long-term impacts on households' financial security?
- How are climate-related shocks affecting how households perceive the security of their way of life?
- How will the potential long-term impacts of the El Niño event vary according to environmental, socioeconomic, and cultural characteristics of villages/ communities?
- How will the potential impacts of the El Niño event vary according to differences in households, including household composition, livelihoods, income, and assets?
- How will the potential impacts of the El Niño event vary according to differences in child characteristics, including gender, age (absolute and relative), and disability?

[22] We define 'external support' as any form of support, be it cash or in kind, that was provided to affected individuals/households/communities by institutions outside of their immediate social network.

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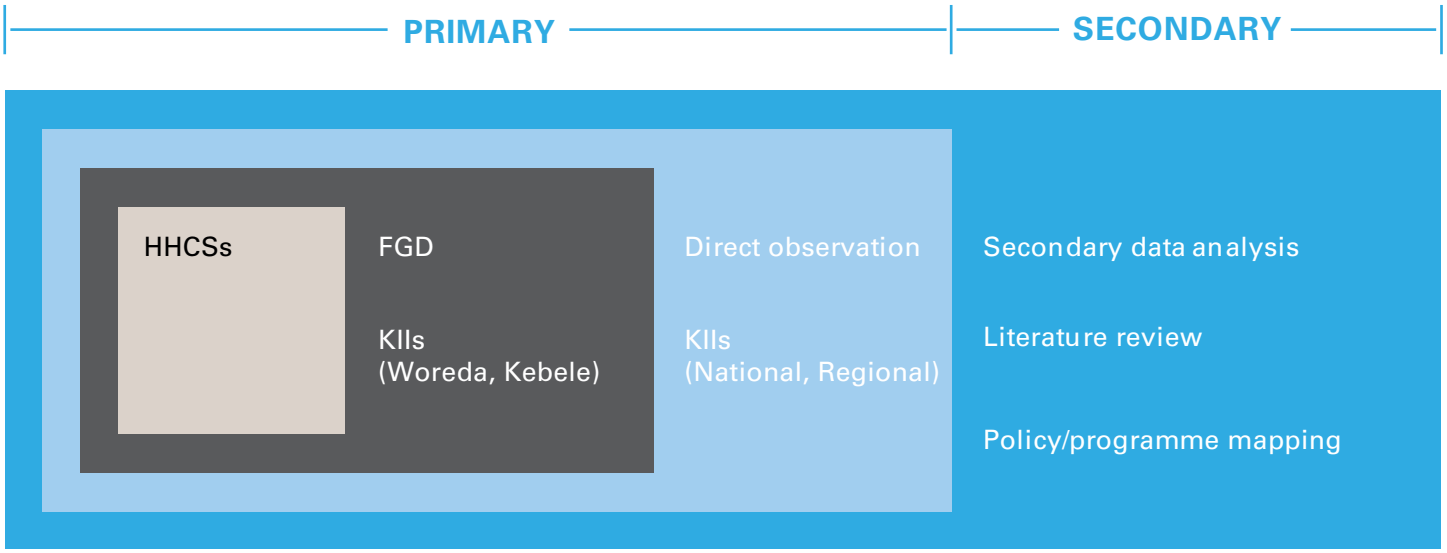
3 Research methodology

3.1 Approach, sampling, and data handling

The research was 'qualitative-driven' across regions, guided by the research questions and framework of capabilities and resilience outlined above. Through a combination of FGDs, KIIs, and HHCSs, data were gathered that provided both a wide perspective across households and a 'deep dive' perspective on the intra-household dynamics that mediated the effects of the El Niño event on children's well-being. This enabled the triangulation of different experiences to explore the '*conditions, possibilities, and activities*' that influence well-being for children, whilst also considering children as important social actors themselves. As noted in the introduction, the research engaged with two groups of children – acknowledging that childhood experiences are diverse and not homogenous. The 'younger children' category included participants aged between seven and 12 years old, and the 'older children' category included participants aged between 13 and 18 years old. These distinctions are referred to throughout the analysis, with further disaggregation by specific age detailed where this is feasible.[23]

Participatory tools were used during primary data collection activities. Informing the research, secondary data and literature analysis was undertaken, alongside a policy and programming mapping (summarised in Figure 1 below). (See Annex A for further details on the methodological approach).

Figure 1 Overview of research methodology and approaches



[23] The age categories have both practical and theoretical significance in terms of the research focus, as well as in terms of exploring coping strategies, as they affect children of different ages (e.g. marriage, education, and responsibilities/labour). The lower limit of children selected to participate in the research would have been four or five years old prior to the 2015 drought, and the recall capacity.

Table 1 Total number of respondents: FGDs, KIIs, and HHCSs in five regions

Method	Total male participants	Total female participants	Total respondents
Adult FGDs	93	92	**185**
Children aged 13–18 FGDs	92	86	**178**
Children aged 7–12 FGDs	49	48	**97**
Adult HHCS interviews	9	10	**19**
Child HHCS interviews	9	11	**20**
KIIs (regional/woreda/kebele)	77	25	**102**
Community timeline mapping	39	9	**48**
Overall total respondents	**368**	**281**	**649**

3.2 Fieldwork implementation

Fieldwork was undertaken in two phases between 20 August and 07 October 2017, with Amhara, Oromia, and Tigray completed in the first round, followed by Afar and SNNPR in the second round. In each region, teams spent a total of two weeks undertaking the research activities in the two selected *woreda* (one week per site). There were no significant challenges encountered to the extent that they affected or delayed the planned research activities (see Annex A for site-specific considerations and their mitigation).

Teams comprised a field coordinator and two qualitative researchers[24]. As far as possible, taking account of the experience required, the teams reflected gender diversity[25]. All the researchers spoke predominant regional languages and/or Amhara. However, an interpreter was provided for the Afar team for research with respondents who only spoke Afar. For both *woreda*s in SNNPR, local translators were hired to translate from Gamogna to Amharic.

3.3 Ethical considerations

Teams followed ethical principles, including the provision of adequate and accessible information, the opportunity to raise questions and consider participation, and clear and explicit details on participants' right to withdraw/not answer at any point. Ethical clearance was granted by the National Research Ethics Committee of Ethiopia and appropriate informed consent was obtained prior to all research activities involving community members. For children, this involved obtaining written informed consent from their parent/caregiver (unless they were an 'emancipated minor'), as well as their written assent.

Particular attention was given to engaging children in the research, including managing potential power differentials and ensuring the age and gender appropriateness of activities. Child protection considerations and reporting requirements for any issues that would be of concern formed a core component of team training. A referral procedure was put in place.

[24] The teams in the first three regions (Amhara, Oromia, and Tigray) were also joined by a member of the core research team from OPM, alongside an interpreter.
[25] The Oromia and Amhara teams contained a female researcher, whilst for the other regions the researchers were both male.

4 Discussion of the context of the 2015/16 El Niño event, drought, and the humanitarian response

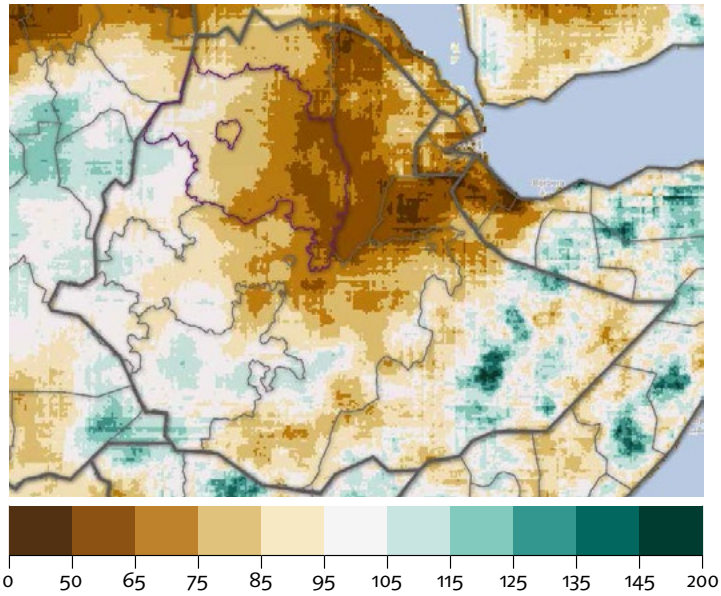
Drawing from both primary data at national and regional level, and secondary literature, this section sets the context for the research by explaining how the El Niño event in 2015 was manifested in the affected regions of Ethiopia – as well as broader dynamics of climate change; the overall scale of the associated humanitarian crisis; and the structure and coordination of the humanitarian response. As such, the section provides the context for understanding the research questions in terms of the implications for the short-term effects and potential long-term threats to children's and vulnerable households' well-being. Indeed, aspects of – as well as the implications associated with – the topics raised here are explored further subsequently (see Section 5). The discussion of the context provided here also relates to the second component of Research Question 3, in terms of the overall effectiveness of the response.

4.1 The coming of El Niño in 2015: '*It just scorched and vanished*'

Following typical El Niño Southern Oscillation (ENSO) patterns, the El Niño peaked between February and October 2015[26]. The 2015 *belg* rains failed, particularly affecting smallholder farmers and pastoralists in the north-east of Afar and northern Somali. Subsequently, summer (*kiremt)* rains started late and were erratic. For pastoralists in Afar and northern Somali, this back-to-back failure pushed households into severe food insecurity. In north-eastern Afar, consecutive seasons of below-average rainfall prior to 2015 had already led to a deterioration in livestock and rangeland conditions. Farmers dependent on the *meher* harvest in eastern cropping areas of Amhara, Tigray, Oromia, and SNNPR were also affected. Many of them, too, had experienced a below-average *meher* harvest in 2014[27]. From February to September 2015, the north, central, and eastern parts of the country received only 50–75% of the rainfall normally expected over the period[28].

The image in Figure 2 shows the total precipitation from 1 February to 15 September 2015 (covering both *belg* and *kiremt* seasons) as a percentage of the long-term average. However, El Niño events occur in a context of climate change and climate variability – and it is critical to bear climate change and climate variability in mind when considering the impacts of the 2015/16 El Niño event in Ethiopia. The consequences of both phenomena upon the country's climate and weather patterns were, and are, mutually reinforcing. Most of Ethiopia is projected to experience more than a 1-degree Celsius increase in air temperature by 2039 – which will exacerbate declines in rainfall.

Figure 2 Precipitation in 2015 compared to average



Source: Singh, R., *et al.* (2016), based on data from Climate Hazards Group InfraRed Precipitation with Stations 4.8 m (1/20-deg) precipitation dataset (1981–2014).

When a drought occurs, and how it is manifested, is deeply context-specific. This is particularly true in Ethiopia, which demonstrates tremendous variation in altitude, temperature, rainfall, soil type, and ecological setting, which means exposure to drought is manifested in very different ways. A significant challenge comes in identifying when a drought starts and ends – given its nature as a slow onset phenomenon whose impacts tend to accumulate relatively slowly over time, and to filter through to economies and the environment

[26] ENSO is a natural climatic phenomenon that comprises warming (El Niño) and cooling (La Niña) phases. It is linked to trends in equatorial Pacific zonal wind stress and shifts in the position of subtropical anticyclones, which drive increases in tropical Indian Ocean temperatures, and subsequently stimulate marine convection, which drives the warming and cooling. At a global level, these shifts in atmospheric convection can cause severe disruptions in global weather patterns. ENSO is one of several examples of large-scale climatological features or modes that can affect local weather patterns – others that are relevant to Ethiopia include the Indian Ocean Diapole and the Tropical Easterly Jet. The negative diapole event in late 2016 contributed to reduced participation in primarily pastoral areas of southern and eastern Ethiopia, contributing to further drought.

[27] Famine Early Warning Systems Network (FEWSNET) (multiple); Humanitarian Requirements Document (HRD), 2016; HRD, 2017; International Research Institute for Climate and Society, 2017; UNOCHA, 2016; USAID, 2016a.

[28] Singh et al., 2016.

long after the meteorological event itself is over. The concept of 'normal' precipitation, which is the baseline from which drought departs, can be difficult to establish – and particularly so in Ethiopia, which is characterised by extreme rainfall variability across time and space, and 75% of whose landmass is dryland.[29]

However, the meteorological analysis of the El Niño event was borne out in its manifestation on the ground. Accounts from across communities evidenced that, although the scientific explanation of El Niño events – or indeed the terminology – was not familiar, its effects certainly were (see Box 4). There were consistent reports across regions and *kebele*s of reductions in rain, and subsequent crop failure, as well as a lack of food for livestock. Observations were made about the changed pattern of weather, including the uncharacteristic stopping of rain in Amhara, and the depletion of the sky in Tigray. Similarly, male community members in Faji Gole, Oromia, spoke of the changing appearance of the clouds and the relation to changing rainfall patterns. Women in Haro Kersa, Oromia, explained that whereas severe drought used to be experienced once every seven to eight years, it is now experienced every year (Oromia, Fentale, Haro Kersa *kebele*, FGD with adult females).

Box 4 Manifestations of El Niño across regions

> '*The 2015–2016 drought was characterised by the early stoppage of rain and the failure of the entire crop sown during July. Farmers couldn't even use the aftermath [remnants] of the crop as fodder for cattle. It just scorched and vanished.*' (Amhara, Burkoch *kebele*, KII with school principal).
>
> '*Not only the soil but also the fertility of the sky is depleted, unlike before we don't see dense clouds in the sky.*' (Tigray, Gurwure *kebele*, FGD with adult men).

Further, the lived experience of climate change was understood by communities, and many attributed the drought to being a punishment from God on account of sins committed. '*Drought in the country in general and our community in particular is occurring because of the commands of Allah. Allah is not happy with our sins and sends droughts in to punish us. The only solution to the drought problem is that we have to respect the rule of God and live according to the rule of God. Unlike Allah man can't reverse the drought situations and we don't have the capacity to change drought to normal.*' (Afar, Addu *Kebele*, FGD with adult men).

More secular interpretations tended to revolve around the degradation and deforestation of the land caused by over-exploitation and over-grazing: '*The cause for drought is deforestation. This problem has affected us since the 1984 drought. The environmental shocks that came after this were moderate but so intermittent. The 2015–16 drought is the second biggest such shock since 1984. Even if it lasts for just a year, its impact was paramount.*' (Amhara, Sivilkay *kebele*, FGD with adult men).

4.2 Into 2016: a partial response to a growing humanitarian crisis

The humanitarian consequences of the El Niño – discussed in depth in Section 5, where the research questions are considered – continued to build into 2016. The 2016 Humanitarian Requirements Document (HRD), published after the *meher* assessment, estimated that 10.2 million people needed humanitarian food assistance. This was in addition to the 7.9 million people supported through the GOE-led Productive Safety Net Programme (PSNP). Into 2017, the impacts of the drought continue to linger – although attributing these to the drought itself become increasingly difficult over time, with the introduction of new shocks and other events (see Box 5 below).[30]

Box 5 A protracted situation: the crisis continues through 2016 and 2017

> While the El Niño event itself declined from early 2016 affected areas continued to experience weather shocks – constraining their ability to recover. In early 2016, *belg* rains were delayed in Afar and eastern parts of Amhara, Oromia, and Tigray – which suppressed the growth of *belg* crops, as well as *meher* long-cycle crops[31]. However, subsequent heavy rains generated flash floods in several regions, with the International Organisation for Migration reporting displacement of nearly 19,600 households during April.
>
> *Kiremt* rains were largely positive in 2016, apart from in lowland areas, where they were below average. The situation in those areas was compounded by the subsequent failure of the *deyr* rains. In turn, localised parts of the highlands were affected by other weather shocks, including hailstorms, frosts, and landslides, affecting harvests.

[29] Carmi, D., 2016; Meke-Hausken, E., 2004.
[30] UNOCHA, 2016.
[31] Ibid.

The 2017 HRD set the number of people requiring emergency food assistance at 7.8 million, but this was subsequently revised up to 8.5 million in August. Again, it should be noted that this number was in addition to the 7.9 million supported through the PSNP. Although a reduction from 2016, it reflects a very obvious indication of significant need. The general situation has improved in central and eastern agricultural areas, and is expected to improve further with favourable *kiremt* rains this year – although a large-scale outbreak of Fall Armyworm is decimating maize harvests, and impacting upon food security across these areas. Furthermore, a humanitarian crisis remains in south-eastern pastoral areas, which have experienced persistent drought, as described above.

From July 2015, the GOE had begun to scale up food assistance in some areas, and also in the second half of the year[32] funds for severe acute malnutrition early response were triggered from development budgets and the PSNP caseload increased. However, the full-scale humanitarian response began only around December 2015, several months after the failed *belg* and poor *kiremt* rainfall seasons. The response was reportedly very slow to build, such that full-scale mobilisation was only apparent by March 2016. According to many people interviewed, this was too late and too slow to avoid or substantially reduce some of the drought's negative impacts (see further discussion of Research Question 3). Non-governmental organisations (NGOs) operating in the affected areas expressed considerable frustration at the obvious mismatch in time and scale between the impacts they could see on the ground, the declaration of a humanitarian emergency, and the mobilisation of the humanitarian response.

Across research sites, community members provided accounts of the delay and what this meant for their ability to recover. In Ebenat (Amhara), community members said that by the time nutrition support emerged '*the drought was almost gone*', and a member of the *woreda* administration in Guba Lafto (Amhara) commented that '*when we started to respond at full scale, farmers were already recovering from the damage due to the healthy next rainy season*'. In Gurwure (Tigray), community members observed that initial delays were followed by more regular provisioning – but that these delays caused significant damage to people who had already been forced to sell their livestock assets, or who already had nothing (Tigray, Gurwure, FGD with adult men). According to the *woreda* health office in Megale, the delay in receiving nutritious food meant that children slipped quickly from being moderately to severely malnourished – with the delayed supplies creating frustration among the staff responsible for screening children.

Early warning systems

Various reasons for the delayed response were given by respondents, many of them relating to the politics of humanitarian relief and the failure of government and international early warning systems to provide timely and accurate information about the nature and scale of the unfolding drought in 2015. FEWSNET, for example, did not forecast El Niño impacts on the 2015 *kiremt* rains and only made forecasts for large-scale food insecurity in 2016 towards the end of 2015 (October); whereas, in reality, the food security emergency had started long before 2016.[33]

The GOE's approach to early warning systems is institutionally complex, and it was beyond the scope of this study to explore systemic shortcomings in detail. However, the complexity starts with a recognition of the fragmented nature of the system, in which government ministries and departments have developed over several decades their own approaches for monitoring specific sectoral hazards. Some of the ways in which drought is manifested among children are not monitored in any comprehensive manner at all – for instance, as it relates to child marriage and migration. For disasters – such as drought – that carry cross-sectoral impacts, such a system is far from ideal. Only with the introduction of Ethiopia's 2013 DRM policy has a mandate been created for an integrated assessment of disasters and their impacts. Yet this mandate will be difficult to realise in the context of weak coordination and un-aligned systems. Other problems associated with Ethiopia's early warning system, identified in a review, include poor quality data, and the lack of appropriate technology, capacity, and standardised tools to collect and analyse data.[34]

The early warning system for food security has evolved in a decentralised manner, with offices at *woreda* and regional level providing information for the responsible federal agency (currently the NDRMC, previously the Ministry of Agriculture and Natural Resources) to analyse and disseminate through monthly bulletins[35]. While sourcing of information at local level makes sense given the diversity of circumstances and the country's decentralised structure, reviews of this system have highlighted issues such as incentives to over-report in order to attract more resources, as well as lack of technical capacity[36]. A representative

[32] USAID, 2016a.
[33] Ibid.
[34] The DEPP Learning Project, 2017.
[35] Emergency Nutrition Network, no date.
[36] Pantuliano, S. and Wekesa, M., 2008

of the Disaster Preparedness and Prevention Office in Ofla described the substantial challenges they face in getting the requisite information and input from other sectoral offices at *woreda* level in order to produce and analyse the data.

However, as the national DRM policy acknowledges, the main source of information that influences humanitarian response strategies (including the HRD, discussed later) is not this regular data-gathering exercise, but the biannual post-harvest assessments, which are jointly undertaken by various line ministries and development/humanitarian partners. During the research, several key informants expressed severe reservations about the reliance on these assessments. Two development partner representatives observed the inefficiency of investing a considerable amount of time and money undertaking an assessment for which the conclusions are, to a considerable extent, predictable. Indeed, it is widely known that failed rains will lead to large-scale food insecurity, as well as in what regions and with what humanitarian impacts. As such, the assessment data was arguably not necessary for planning key interventions, given the knowledge alone that an El Niño event was happening and what this implied for large swathes of the country. The quality of the data generated through the assessments was also raised. A key informant from government summed this up as follows: '*seasonal assessment is campaign work. Fatigue is setting in from all sides. Institutions tend to assign inappropriate persons just because they want to be represented*.'

More generally, key informants suggested that a focus should be placed on enabling regular flows of relevant data, as a more useful basis for planning interventions. A government respondent commented that such a system could be supplemented with targeted assessment data where needed. For instance, where the regular data were not sufficiently comprehensive or relevant to provide an accurate picture of a crisis, specific additional data collection activities could be undertaken. The data collection approach in each case would be determined by the specific nature of the situation, thereby respecting the fact that different climatic hazards manifest themselves in different ways. As mentioned, Ethiopia already has the systems and institutions in place for feeding data up from the ground level, though there are issues at lower levels around incentives and capacity, which affect data quality[37]. According to informants from humanitarian agencies, there is capacity in the country to move in this direction, but it requires a complete integration and working together of all the early warning systems – government *and* non-government.[38]

4.3 Coordination and delivery of the humanitarian response

4.3.1 Coordination at the federal level

Despite mobilisation delays being raised in relation to the efficacy and impact of the response, it is important to acknowledge that it was widely remarked that the response to the 2015 drought marked a significant improvement compared to previous drought events. Government ownership and leadership of the response was reported as a major driver and feature of the improvements in the response. Across development partners and international NGOs (INGOs), key informants observed that this leadership was evidenced not only in terms of the amount of funds committed directly by the GOE but also by a strong impression that the GOE was the first to move in recognising – and mobilising a response to – the situation, with donors following. Down to *kebele* level, this impression held – with men from Gurwure *kebele* (Tanqua Abergele, Tigray) observing a high degree of government support in 2015/16 compared to previous shocks – attributing the absence of human (and livestock) deaths and migration largely to this.

NDRMC was a relevant institutional actor in the drought response (see Box 6, below). Indeed, according to a representative from NDRMC, the degree of GOE leadership gave technical civil servants greater confidence to speak to the humanitarian community.

37 Ibid.

38 Following the 2003 drought, the GOE and humanitarian partners came to realise that there were households whose needs were predictable, which needed predictable resource transfers. These were the chronically food insecure. The PSNP was designed for this group. Those whose needs could not be predicted well in advance were the transitory food insecure, and these were left to emergency responses. Almost 15 years later, there is consensus that the country needs to look at its emergency case load again and see if the needs of the transitory food insecure have actually become more predictable.

Box 6 The role of the NDRMC

The role of the NDRMC, and the institutional implications of its creation, were an important factor in the 2015/16 El Niño response. The institution's coordination mandate across sectors and levels was considered to be positive by respondents, presenting an important opportunity for managing disaster risks effectively. Further, its situation in the Prime Minister's office – instead of as a line ministry – was considered to strengthen its ability to coordinate and ensure a timely response. A GOE respondent suggested that the creation of the NDRMC reflected, in part, a paradigmatic shift away from disaster response to one of DRM, which should allow Ethiopia to deal with its climate risk in a more proactive and integrated manner. However, the same respondent commented that the occurrence of the El Niño so soon after the establishment of the NDRMC meant that the paradigm shift was effectively aborted as the GOE reverted to an emergency response. The status of the NDRMC as an 'emerging organisation', where capacity gaps remain – particularly in terms of the adequacy of human resources and the ability to coordinate vertically through the GOE, as well as horizontally – was confirmed by donor partners. There was also concern about the implications for coherence and coordination of separating various functions relevant to DRM across government – for instance, the responsibility for the PSNP (including contingency budgets) remains within the Ministry of Agriculture and Natural Resources.

This is not to say that respondents did not attribute a significant role to donors and development partners, in terms of resourcing and shaping the response. The development of the country's joint annual HRD provides a clear illustration of the role that UN agencies, development partners, and INGOs played – and play – in emergency response. The Foreword to the 2016 HRD states an intention to focus '*on saving lives, but also on protecting and restoring livelihoods. The aim is to help people recover quickly from shock, and to prevent further deterioration*' (to which we return in Section 4.4).[39] The HRD provided the framework for response coordination – defining needs as well as outlining what interventions and resources, and over what timeframe, were required to meet those needs. This included defining operational response 'clusters', chaired by the relevant government ministry/department, and typically deputised by INGOs or UN agencies, with a strategic advisory group comprising various development partners and experts.

There were reported differences in terms of the efficiency, coordination, and effectiveness of these clusters. There was a suggestion that, whilst all institutions wanted to be represented, not all were able (or willing) to send the 'right' people. Several comments suggested that the nutrition cluster worked relatively well, in terms of designing and delivering the response. Indeed, Save the Children's comparison of the 2011 and 2016 nutrition responses reported significant improvements in the latter case in terms of GOE leadership, programme coverage, and quality of intervention.[40]

The logistics cluster, however, was reported to have faced significant challenges including coordination between the GOE and donors, delays with the deployment of food, and unclear information about processes and progress. These comments are backed up by an update on the Targeted Supplementary Feeding Programme in May 2016 which attributed low delivery performance mainly to significant delays in government-contracted secondary transport for targeted Priority 1 *woredas*[41]. Warehouse capacity, particularly in the port in Djibouti, was identified as a further problem. A specific issue mentioned was poor coordination between imports and transportation of fertiliser, on the one hand, and humanitarian relief, on the other – which delayed provision of the latter.

Child protection was included as a specific operational response area in the HRD for the first time in 2016: the Ministry of Women's and Children's Affairs (MoWCA), which coordinated the Child Protection/Gender-Based Violence cluster (supported by UNICEF and United Nations Population Fund), commented on the difficulty of getting donors and the GOE to take it as seriously as other clusters. A Ministry representative expressed disappointment that the majority of funds were going to workshops, instead of more direct interventions to improve child protection outcomes; this perception, however, is not borne out by the cluster tracking data.[42]

4.3.2 Coordination at the sub-national level

At the sub-national level, specific institutional arrangements for managing the response were put in place both at *woreda* and *kebele* administration levels.

Technical committees and steering committees

[39] HRD, 2016.
[40] Babu, G., Ruishauser-Perera, A., and Prudhon, C., 2016.
[41] WFP, 2016.
[42] Cluster tracking data which show that only 10% of the funding provided for child protection was used for strengthening of community care coalitions and training, and that 31,040 children received direct child protection services (including 5,448 children who were reunified with their families, migration being a main factor in explaining the separation).

or 'command posts' were established within *woreda* administrations (reported in Afar and Tigray, specifically). Steering committees were chaired by the *woreda* administrator and involved representatives of sectoral departments. They took decisions based on the information received by technical committees – which included representatives of NGOs as well as the GOE. Similar coordinating institutions were formed in some *kebele*s, reporting to the *woredas*, who in turn reported upwards to regional governments. According to reports from *woreda* staff in Afar (Megale), the committees at *woreda* level included collaboration between the pastoralist office and the women's affairs office, alongside sectoral representation from the water, health and education offices. Responsibilities included '*daily follow-up*' on the drought response, ensuring distribution of food and other materials during the drought period. Similarly, in Tigray (Ofla), the technical committee (referred to as the '*Command Post*') comprised representatives across sectors (water, health, food security, agriculture, and education), as well as administrators in each *kebele*, with responsibilities including overseeing distribution and coordination of vehicles for delivery (Tigray, Ofla, KII with Water Office). The technical committee here provided an information-linking service between the *woreda* and the *kebele*.

Woreda officials across *kebeles* and regions emphasised their role as coordinators and supervisors of NGO activities. According to them, NGOs were supposed to design and implement their activities in line with the requests of local government and in order to fill gaps in coverage and/or resources. In many cases, this system did appear to work. A representative from an NGO operating in Tigray explained that their selection of intervention areas prioritised *woredas* based first on hotspot classification, and subsequently in discussion with *woreda* governments to select *kebeles*. In Dulecha (Afar), however, *woreda* officials reported that an NGO had selected *kebele*s for distribution of food and oil without consulting the *woreda* offices. This apparently created a number of problems – including disruption of normal coordination procedures, as well as causing anger and upset in other *kebeles*, which considered the selection (and the method) to be unfair.

On the other side, many NGOs and development partners expressed frustration at the challenges of working with local governments. They reported that *woreda* and regional administrations were highly stretched in terms of human and technical capacity, and there were reportedly delays in signing memoranda of understanding with sub-national governments, as well as delays in payments to contractors given that accounting systems struggled to cope. Frustrations about inefficiencies and lags in the process of working with lower levels of government were voiced by several NGOs, with one respondent suggesting that they '*do not fully understand the urgency of the matter*'. The assessment of the 2016 nutrition response completed by Save the Children also found human resource capacity constraints.[43]

4.3.3 Targeting the most affected

The extent and severity of the El Niño event was such that in Priority 1 *woreda*s a very high proportion of households were (and reported themselves to be) badly affected. By all accounts, identifying the 'most affected' was a labour-intensive exercise: leaders in Megale worked with suppliers to identify which households were unable to afford animal feed for themselves and which, therefore, would receive free animal feed distribution. In Guba Lafto, Amhara, technical staff at the *kebele* level went door to door to check the food holdings of farmers. Communities took the initiative to redistribute aid received, to 'self-correct' targeting errors – which seemed to mainly relate to perceptions that aid was not provided to *enough* households, rather than it being provided to the *wrong* households. For instance, in Sivilkay, Amhara, animal fodder was distributed to about half of the households. Although the community requested that this be expanded to include all households, or provided on rotation, the request was not accepted and so households shared among themselves. This was also the case with food aid received in Faji Gole, Oromia.

There are indications that women – particularly pregnant and lactating women – were targeted in a number of interventions, especially interventions aimed at providing supplementary feeding and nutrition support (see Research Question 3). In Oromia (Shashemene Zuria), *woreda* staff explained that support provided through the Targeted Supplementary Food programme (in operation from the beginning of the drought) was aimed at the provision of nutritious food specifically to children under five and pregnant and lactating women. Similarly, in Afar, the Mobile Health services received distributions of *fafa* specifically for pregnant and lactating women, and in SNNPR (Mirab Abaya) through collaboration with a number of NGOs, the government provided supplementary feeding to children and pregnant and lactating women. In Afar (Dulecha, Tirtira), *woreda* staff reported that households with pregnant and lactating women were targeted by one NGO distributing cash to support vulnerable households.

Community members in two sites reported cases where influential individuals were able to channel aid to their families and supporters, or register themselves

[43] Babu, G., Ruishauser-Perera, A., and Prudhon, C., 2016

multiple times on beneficiary lists. Overall, however, observations concerning the deliberate re-direction or misuse of resources were limited, which could be due to a combination of factors, including the actual situation but also the sensitivity of disclosing such information.

4.3.4 Stakeholders in the response

Beyond the GOE, development partners, and NGOs, there were several reports of local businesses and local investors contributing to the response, typically in the form of in-kind aid (e.g. livestock feed from the by-products of sugar factories, wheat mills, and beer factories) or logistical support (e.g. vehicles provided by transportation companies and others) – or even their own uniforms (Amhara, Ebenat, KII with Admin Group). In Fentale, Oromia, *woreda* staff reported that they had agreed to provide a certain proportion of their monthly salary to the local disaster prevention and preparedness office.

Farmers and individuals in neighbouring *woreda*s provided in-kind aid to the worst affected, including free provision of maize and sorghum grown in a nearby *woreda* (where there was irrigation) to farmers in Guba Lafto. This was collected and distributed by the *woreda* government. Community members also helped prepare school meals without payment, and there were reports of donations from local universities and local churches in various locations.

4.3.5 The role of social protection

The PSNP is well known as one of the largest social protection programmes in Africa, and its role in helping affected communities and households to cope with the drought is noteworthy. Indeed, shock-responsive social protection is widely acknowledged in the literature as a strategy for helping poor households to deal with both structural crises and shocks in an integrated manner[44]. Furthermore, a review of how social safety nets influenced the response to the drought identified that the '*adaptive capacity*' of the PSNP enabled it to contribute to the response, but that the 2015/16 event provided an opportunity to '*identify challenges in the system*' and to learn – including in terms of coordination and use of the contingency budget[45]. As a social protection programme, the PSNP has different objectives and operational procedures to humanitarian relief – albeit some shifts in PSNP design reflect humanitarian principles and priorities: for instance, PSNP 4 is nutrition-sensitive, with specific provisions for severe acute malnutrition and moderate acute malnutrition caseload. It is focused on reducing the food insecurity of poor households through food assistance and cash transfers, and building community assets and supplementing household incomes through public works. It does not address the various other dimensions of well-being impacted by drought. Furthermore, it only reaches half of those who are vulnerable to absolute poverty in Ethiopia and, as a representative of one of the PSNP's main development partners stated, in no feasible financing scenario could it be extended to meet all needs.

The issue of coordination between the PSNP and the humanitarian response was raised by several respondents, which is unsurprising given that both initiatives disburse relief assistance, and particularly given that the PSNP's contingency budget is explicitly designed to scale up assistance in the context of a disaster. Respondents mentioned the need to avoid a situation where people had an incentive to move

[44] OPM (2015 and 2016) describes various mechanisms through which social protection systems can be 'scaled up' in the case of a shock, including vertical and horizontal expansion, piggybacking on the infrastructure of other programmes and 'shadow alignment', where the humanitarian system runs parallel to social protection programming.
[45] Getinet, B. et al., 2017.
[46] USAID, 2016a

between enrolments in assistance programmes or are able to claim food assistance from both programmes in excess of their formal entitlements. Other types of assistance, such as nutritional support and livestock assets, were provided to beneficiaries regardless of whether or not they were enrolled in the PSNP.

The most obvious example of coordination between the PSNP and humanitarian relief was the use of $16 million of the federal-level PSNP contingency budget for cash transfers in accordance, with the HRD framework, between July and September 2015[46]. Other than this, efforts to coordinate were limited. Indeed, despite a shared objective of reducing food insecurity, there appears to be a considerable 'silo-ing' between the PSNP and humanitarian actors. A review of the El Niño response by USAID noted 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.*'[47] However, an NGO respondent said that links between their own livelihoods interventions and the PSNP had improved: whereas previously they felt that the PSNP was looking over their shoulder, the emphasis now was on mutual learning to achieve shared goals.

Development partner and government stakeholders acknowledged the efforts made to learn and adapt the PSNP based on evidence gathered in previous phases – but with issues still to iron out. Difficulties in triggering the remaining $50 million[48] of the PSNP contingency budget were reported at the federal level and attributed in one case to operational challenges associated with the NDRMC. One key informant suggested that the drought had shown some households had 'graduated' from the PSNP too soon, as they slipped back into food insecurity. The decision in autumn 2017 to include 4 million former PSNP clients in the revisions to the 2017 PSNP indicates that this problem may have been recognised,[49] but insufficient evidence was gathered at the community level to verify this.

4.4 Saving lives, but not livelihoods

It was frequently mentioned by informants (at federal, regional, *woreda* and *kebele* levels) that the humanitarian response was characteristically driven by a focus on saving lives, with human fatalities nowhere near on the same scale as they had been in previous droughts. However, there was also acknowledgement that this measure of success is partial, and inadequate, as those people whose lives are saved will require emergency relief as soon as the next disaster strikes. Indeed, this speaks to the intention laid out in the HRD to protect and restore livelihoods. Yet the general picture painted by this research suggests severe limitations in terms of the recovery – indeed, the resilience – of affected communities, and a respondent from the NDRMC observed: '*lives are saved but we are still far from saving livelihoods*'.

This was reflected down to the *woreda* level, with staff at the *woreda* administration in Afar's Dulecha *kebele* confirming that the number of people receiving emergency aid since the end of the drought was higher than it was in 2015 and 2016. The HRD put the number of people requiring emergency assistance in 2017 at 8.5 million. This suggests that people were not only unable to recover from droughts experienced in recent years but are not in a position to cope with future droughts without further negative impacts on their well-being.

One respondent observed that '*once a hotspot, always a hotspot*' in reference to the persistent

[46] USAID, 2016a
[47] Ibid
[48] i.e. additional to the $16 million of the federal contingency budget spend between July and September 2015.
[49] UNOCHA and GOE, 2017.

vulnerability, and lack of resilience, that characterise many communities affected by drought. As regards longer-term resilience and how this will inter-play with children's well-being, humanitarian aid is not helping people to build safer and more productive lives. This is a problem that is recognised in the academic literature[50] and was reflected by key informants in this research, who suggested that repeated provision of aid was creating dependency, with direct implications in terms of reducing prospects for resilience. A staff member of the health centre in Oromia's Faji Gole said that aid dependency is becoming a major problem in the community, emphasising the need for building self-reliance (KII with a Health Centre Head). A school director in Maddo Mukanekka said that the community is becoming more aid dependent, rather than less, and that – instead of food aid – the focus should be on providing improved seeds and building assets (SNNPR, Boricha, Maddo Mukanekka, KII with school director). These considerations are discussed further in Section 5.3.

Furthermore, there is evidence – both from this research, as well as from other studies – that although livelihoods were broadly affected by the drought, there were different degrees (and types) of impact on men and women. The livelihoods of female-headed households and women in polygamous households were often more 'restricted', making them vulnerable to the drought in different ways, including – in some cases – being less able to undertake alternative income-generating activities. For example, in Tigray (Tanqua Abergele, Gurwure), the women's affairs representative referred to the vulnerability of female-headed households, describing how one woman had to sell the government support to purchase food additives: '*the drought affected these women the worst. They have nothing to eat and the women from the rest of the community always go to them and share with them what they have.*' Not only did the drought differentially impact on livelihoods, it also triggered changes in livelihoods activities: for example, women were reported to be diversifying their income-generating activities and engaging in income generation. In Afar, this was reported to be a '*new practice in our culture*' (Afar, Dulecha, Tirtira, FGD with adult women).

Whilst considerations associated with these 'gendered' impacts (as they relate to the research questions) are considered broadly across Section 5 below (as well as in Section 6), the differences point to how response mechanisms, if they are to 'save livelihoods' should take account of the differences in livelihoods impacts between men/women.

4.4.1 Aligning humanitarian aid with resilience

The GOE, development partner organisations, and NGOs are typically structured in a manner such that emergency interventions are implemented with different human and financial resources than non-emergency interventions. As observed by a development partner with long-standing involvement in Ethiopia's emergency response operations, this reduces efficiency and creates trade-offs, where the stronger systems and better resources tend to go to the humanitarian 'wings' of organisations, at the expense of development activities. However, there are indications that the traditional division between 'development' activities, on the one hand, and 'humanitarian' activities, on the other, is being bridged, providing a context for transformative interventions that can save lives, but more fundamentally build the circumstances for sustained well-being. There are some potentially transformative interventions taking place in the guise of development programmes: for instance, seeking to connect rural communities to the opportunities presented by markets and value chains, or helping them to save money followed by productive investment. Some of these interventions are discussed in Section 5.3).

Furthermore, the concept of 'pivoting' funding from development projects towards humanitarian requirements was mentioned in the context of donor activities, as well as there being a suggestion that an overall approach that Ethiopia could take to managing disasters would be to merge the two 'wings', institutionally and operationally. This would create a key coordinating role for the GOE to instruct donors when and how much to 'pivot'. USAID's (2016) review of the 2015/6 El Niño response observed that: '*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*'.[51] One development partner respondent discussed the '*crisis modifiers*' built into various sectoral programmes, and described ongoing efforts to redesign a major food support programme to include a 20% budget contingency budget for emergencies.

[50] Eriksen, S., et al., 2017.
[51] USAID, 2016a.

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5 Main findings in response to the research questions

In the sections that follow we present detailed findings against each of the four research questions, highlighting that children's well-being was in the front-line of the direct impact of the El Niño drought. As noted in the introduction, children directly involved in the research were considered in two groups: younger children (aged seven to 12) and older children (aged 13 to 18), and they are referenced as such in the following sections and analysis. The analysis outlines differences in the experiences of children by age and gender to the extent that the evidence/data enables this, and where age-specific information is available (see specifically Section 6), this is made explicit.

Figure 3 below provides a schematic depiction summarising the findings, accompanied by the overview presented in Table 2. The schematic diagram depicts the effects of the drought on children's well-being, which was in the front-line of direct impacts from the El Niño drought (**Research Question 1**); and how these were mediated, as well as how they were further influenced by coping strategies undertaken (**Research Question 2**). Indeed, as noted in the discussion: (a) there is a conceptual overlap between short-term impacts and coping strategies, and (b) short term impacts may be **direct**, resulting from the unmediated impact of the drought, or **indirect**, resulting from a use of a coping strategy to mitigate other impacts. Furthermore, the diagram depicts the external interventions, and how these influenced both coping strategies and impacts on well-being (**Research Question 3**), and it also depicts the longer-term impacts (**Research Question 4**).

As depicted in Figure 3, the research identified a cycle – with longer-term impacts having a reinforcing impact on immediate impacts, as well as further influencing coping mechanisms. Indeed, it was found that most coping strategies employed were not new, but, rather, were intensifications of existing strategies. They were also very specific to the livelihood orientation of each *kebele*, and were mediated by various factors, including external interventions. However, in the absence of 'resilience' this cycle will likely contribute to declining livelihoods, with implications for children's future well-being (noting the challenges inherent in assessing long-term impacts in a non-longitudinal study design).

Table 2 Summary of the main findings against each research question

RQ	Summary findings
Research Q1: Short-term impacts	• **Crop failure and drying up of water sources** were the first impacts felt when the *belg* and *kiremt* rains failed, resulting in a reduction in the amount of self-cultivated foods available, as well as a reduction in the income earned from selling cash crops in agricultural and agro-pastoralist *kebele*s. In pastoralist and agro-pastoralist *kebele*s, it also resulted in a lack of animal feed crops. • **Crop failure** forced residents of the study *kebele*s to reduce the frequency, size, and dietary diversity of their meals. Study participants spoke of the hunger suffered by adults and children, and Health Extension Workers reported spikes in severe and moderate acute malnutrition. • Chronic hunger affected children's attendance and performance at school, although this was to some degree ameliorated by school feeding programmes (Research Question 3). • **Drying of water sources** had detrimental effects on livestock herds in pastoralist and agro-pastoralist *kebele*s. • Drying up of water sources also affected study participants' access to water for domestic uses across the study *kebele*s. Study participants described suffering from thirst in the extreme heat, and children's skin becoming dry and cracked while waiting in the sun at water points. In Amhara and Tigray, study participants described an irritated, itchy skin condition, which they attributed to poor hygiene and poor health.
RQ2: Coping strategies	• In agricultural and agro-pastoralist *kebele*s, **economic migration** increased, took on a greater importance, and expanded the age range of migrants (including younger boys in the El Niño event), with destinations including nearby *woreda* towns, large cities, including Addis Ababa, and abroad to the Gulf States. Generally, sending children to work in non-pastoralist jobs away from home was proscribed in pastoralist communities; transhumant journeys were, however, undertaken by children in pastoralist households. • Economic migration exposed children to exploitation and poor treatment; this problem was also found among more vulnerable children in the study's younger age band (7–12 years). In extreme cases, children were victims of unscrupulous people smuggling and were kidnapped for ransom. • **Transhumant journeys** became longer, in both distance and duration. Such journeys were undertaken principally by fathers and older boys, with younger children speaking of concerns for the safety of their fathers and brothers. • **Transhumance and economic migration had negative impacts on school attendance and drop-outs**, especially among older boys. • Children—particularly younger children and girls—participated in a range of **income-generating activities closer to home**, including basketry, collecting and selling firewood, working as agricultural labourers on the farms of better-off families, working on a local dam construction project. Because of more prolonged absences of mothers and older sisters (fetching water), younger boys (7–12) also carried out some household tasks which would normally have been done by women and girls, such as cooking and cleaning. • **Water collection** became a much harder task than it had been in the past, with women and girls travelling much further afield and standing in long queues to access water. Respondents reported a range of increased times and distances for water collection: in general, in non-drought conditions, water sources were less than an hour away from homes, during El Niño, collection trips were reported to take several hours. Girls in one *kebele* reported that there had been instances of sexual assault during El Niño and that they preferred to travel together for safety. • **Financial coping mechanisms** included accessing loans from savings and loan institutions operating at *kebele* level. High interest made this problematic, especially where livestock or land had been offered as collateral. In Muslim *kebele*s[52], interest-free loans and charitable donations were provided to the most vulnerable households. However, when money was borrowed, it did not tend to be used for capitalising productive investments, but for immediate consumption. • Study participants also spoke of **social life-oriented coping strategies**, such as the postponement of marriages (to avert the significant economic outlay) – although in some areas, child marriage was reported to have increased. Especially for pastoralists, high levels of solidarity and **social capital** associated with the clan-based social organisation were reported.

[52] In Sharia law, charging interest on money is forbidden.

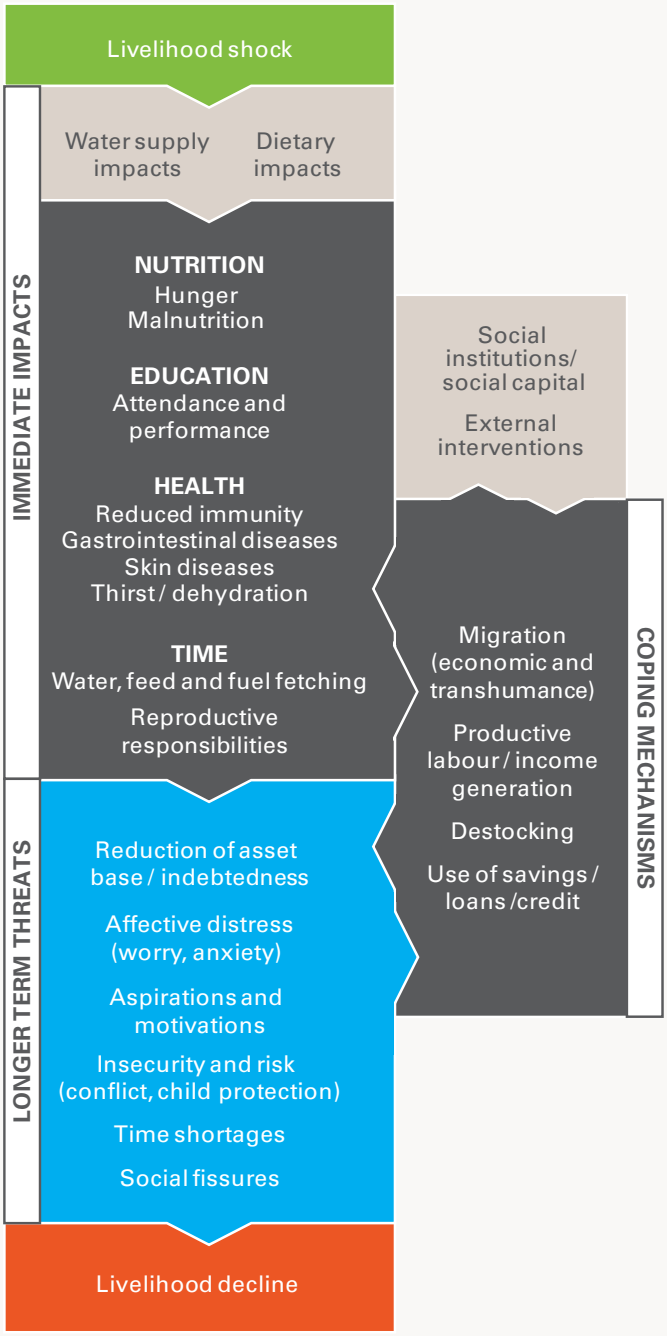
Research question 3: External interventions

- **Livestock feed distribution** reduced livestock death and herd depletion, with positive effects on children's well-being. However, it was late in arriving and may not have been sufficient in all cases (noting the importance of transhumance).
- Other **livelihoods interventions** included agricultural inputs (though not considered a strong element of the response), provision of 'improved' cattle (expensive to care for and not sufficiently resistant), and support for (unavoidable) destocking.
- **Food aid**, including very welcome school feeding programmes, as well as provision of oil and grain to vulnerable households, mitigated acute food security crises. However, it came late, was not always sufficient, and when people were not informed about when they would receive it planning livelihoods strategies was challenging. People were often already hungry and already engaged in coping strategies with potentially negative effects on children's well-being.
- **Health and nutrition interventions** were important, providing referrals and screening, as well as high-energy ready-to-use therapeutic foods for moderate and severe malnutrition cases, in addition to medicines for skin conditions and diarrhoea. Existing programmes were scaled up and new delivery methods used.
- **Water supply** – trucked-in water, and conservation work – addressed both emergency response and development angles. Trucking was especially important for helping to address acute shortage, but supply did not meet demand or alleviate the water-fetching burden on women and girls. Problems with supply had knock-on effects for school feeding programmes**. Effective mapping, sourcing, and management of groundwater** is considered to be one of the most important initiatives that should be undertaken for building resilience to droughts.

RQ4. Long-term impacts

- **Food, water, and livelihoods**: Longer-term food security is related to livelihoods resilience, with water supply recovery central to this resilience. In Afar, whilst ongoing water shortages were experienced as a result of incomplete groundwater recharge, investments in water security helped ensure ongoing water supply and reduced the need for long-distance transhumance.
- **Herd depletion** had immediate effects on household food security and asset holdings, particularly in pastoralist communities, and – at the time of the study – participants emphasised that their herds had not recovered to pre-drought population levels. There are reasonable questions to be asked about the viability of truly pastoralist livelihoods under current climatic conditions.
- While **agricultural production** levels are widely reported to have recovered to pre-El Niño levels, long-term resilience in agricultural production needs to be considered in the larger context of soil erosion and exhaustion, deforestation, population pressure, and future climatic change, all of which are potential threats to the agricultural carrying capacity of agricultural land. A limited but potentially worrying finding is the tendency of some participant households to maintain the same restricted consumption practices they had adopted during the drought as a way of cushioning themselves against future shocks.
- As demonstrated through a review of longitudinal evidence, **human capital** (in the areas of health, nutrition, and education) is an area of potential long-term threat, on account of chronically high parasite loads resulting from poor WASH practices and water shortage, chronic malnutrition (stunting), and educational performance and attendant problems.
- Although there is little long-term evidence on these, **affective and aspirational threats** (to children's capabilities) need to be taken into consideration. Children, both male and female, reported emotions including sadness, fear, worry, and disempowerment, and were conscious of the limitations on the future lives they aspired to lead. In the absence of longitudinal studies, it is hard to assess exactly what the future degree of threat might be, but there is little doubt that from a child development perspective, these are non-optimal emotional experiences for children.
- Finally, **social implications**, such as delayed marriages and ruptures to the social fabric, were reported in the study *kebele*s. While early marriage is in itself problematic, disruptions to normative life-cycles may also have well-being impacts. Evidence shows that reduced social capital, such as that resulting from people's inability in drought periods to fulfil the demands of reciprocity and altruism usually enjoined by social networks, potentially threatens longer-term resilience.

Figure 3 Overview of the immediate impacts, coping strategies, and longer-term impacts on well-being identified by the research



5.1 Research Question 1: Short-term impacts and effects of the El Niño drought

What were the immediate effects of the 2015–16 El Niño event upon the most vulnerable households and their children's well-being in the affected regions?

In this section we address Research Questions 1 and 2. We draw principally upon primary field data from FGDs, HHCSs, and KIIs. Where appropriate, we reference the two waves of the LSMS-ESS findings, which were re-analysed and discussed in the standalone volume submitted during inception, *Generation El Niño: Long-term Impact on Children's Well-Being. Quantitative Assessment of Households Affected by the 2016/15 Drought*. We have chosen to present findings on Research Question 1 and Research Question 2 in close proximity because of the considerable conceptual overlap between the questions: Research Question 1 asks about the nature of short-term impacts on children's well-being, while Research Question 2 explores the coping strategies adopted by families to mitigate these impacts. In many, though not all, cases, the short-term impacts of El Niño are in fact related to coping strategies adopted by affected families. That said, we believe there is value in the distinction, and it has been retained throughout the various phases of this research project—not least because the drought produced a number of short-term impacts which were *not* related to coping strategies. It is important to understand **what** coping strategies were adopted by people in the different *kebele*s making up our sample, and of course what kinds of **impacts** these strategies have had on children's well-being. Equally, we must be able to distinguish these strategies and their effects from the direct and unmediated impacts of the drought on children's well-being.

The presentation of findings provided below is largely framed in terms of multidimensional well-being, building on Sen's capability approach, and exploring both objective and subjective dimensions. We consider impacts and coping strategies related to resources (such as assets, food, shelter, WASH, and finance), actions (livelihoods, work, time use, and migration), social aspects (such as gender roles, marriage patterns, social capital, and security), and human capital dimensions (health, nutrition, and education).

5.1.1 Livelihoods: immediate, acute impacts on children's well-being

Box 7 The meaning of drought

> '*Drought is lack of access to food, it is absenteeism from school, shortage of grain from home and buying food from market, it means shortage of water, it means lack of rain, it is eating only once a day, it is the failure of cropped maize and haricot bean, it means raining one time and lack of rain for more than three months.*' (SNNPR, Maddo Mukanekka *kebele*, HHCS interview with young child).

The most immediate effects of the 2015–16 drought, and by far the most salient in the responses of study participants, were related to livelihoods—whether primarily agricultural (Faji Gole *kebele* in Shashamene Zuria, Oromia), agro-pastoralist (Burkoch and Sivilkay *kebele*s in Amhara; Maddo Mukanekka and Yayike *kebele*s in SNNPR; Gurwure and Adishum Bereket *kebele*s in Tigray) or pastoralist (Haro Kersa *kebele* in Fentale, Oromia; Tirtira and Addu *kebele*s in Afar). Impacts varied across a number of factors, including significantly by livelihood type: agro-pastoralists emphasised the effects of crop failure on their production of fodder, whilst pastoralists in Afar flagged up the effects of the drought on wild pasture growth. Ultimately, whether the drought affected cultivars for animals and humans, or the accessibility of viable wild pasture, the effect was the same: cattle famine, die-off, and herd reduction. Across the *kebele*s, both the immediate effects on livelihoods, and the mediating coping strategies employed to mitigate the worst of these effects, lie at the heart of the principal short-term impacts of the El Niño drought on children's well-being.

5.1.2 Crop failure and food security: 'We had hunger every day'

Crop failure was the first threat to livelihoods across the study *kebele*s. For the agriculturalists of Faji Gole, crop failure translated into both a loss of income and food insecurity, deriving both from their reduced capacity to purchase foodstuffs as a result of their own cash crop failures, and from the failure of the food crops grown for domestic consumption. Respondents reported a reduction in the frequency (very often to two, and sometimes to one, meal a day) and size of meals, as well as a drop in the quality of meals, exemplified in the shift in staple food from maize to *shalele* grass. In the pastoralist *kebele*s of Afar and Haro Kersa in Oromia, respondents reported similar reductions in the quality, size, and frequency of meals, but pointed in particular to the sharp reduction or total removal of milk and butter from their diets during the drought, as a result of cattle death and moving herds far away in search of better pastures[53]. The Health Officer in Afar's Megale *woreda* made this point: '*As the animals move too far, women and children left in the house were not able to get enough animal products such as milk and meat to drink/eat. As a result, they were exposed to food shortages and hence malnutrition.*' (Afar, Megale *woreda*, KII with Health Office). This point also comes across clearly in the analysis of the 2013/14 and 2015/16 waves of the ESS, which indicated a 14 percentage point increase in the number of drought-affected households which experienced food shortages at the time of El Niño.

The agro-pastoralists of Amhara, SNNPR, and Tigray suffered loss of food crops, cash crops, and feed crops: the first, direct impacts of these losses on children's well-being were, as in the case of the other livelihoods zones, dietary. Meals became smaller, poorer, and far less frequent. Between-meal snacks, such as roasted grains, disappeared, and consumption of dairy products dropped off. Younger children in Tigray's Adishum Bereket *kebele* emphasised these points and pointed to the importance of the school feeding programme (Box 8).

Box 8 Consumption, food supply and school feeding

> '*[During the drought] our consumption of milk was highly decreased, vegetable consumption totally stopped because irrigation was decreased, and the amount and frequency of food supply was decreased. We had hunger every day and things would have been difficult if the school feeding programme had not been in place.*' (Tigray, Adishum Bereket *kebele*, FGD with younger children).

In an FGD held with older boys in the Amhara *kebele* of Burkoch, it was explained to our researchers that '*[during the drought] the amount of food they used to eat at one meal was decreased drastically…before the drought they used to eat two to three* injera *in one meal, but during the drought they were forced to eat half an* injera *in one meal*'. (Amhara, Burkoch *kebele*, FGD with older boys). Amhara informants also lamented the shift from the *injera* made with the staple *teff* to the cheaper sorghum (commonly used in non-drought periods for feeding animals and brewing beer), while some Tigray respondents reported a parallel shift from sorghum- and maize-based *injera* to a wheat-based form. Food substitutions and shifts were not restricted to staple starches: access to the vegetables and legumes traditionally accompanying starchy foods

[53] Milk is the most important food in pastoralist communities; in Afar, it is consumed with the roasted outer carapace of the coffee bean, called huja.

became very difficult across the study *kebeles*, and a commonly-cited coping strategy was to eliminate or drastically reduce the consumption of these items in meals, sometimes substituting in cheaper or gathered alternatives. A respondent in a female FGD in SNNPR noted: '*The types of food eaten have been changed. Previously we used to eat sweet potato, peas, bean, barley, chickpea, wheat, and maize. After the drought, it is only maize that we eat. Moreover, children have started eating tree fruits, like "*key bedena*" and "*kore*," which were previously eaten only by monkeys and baboons but not by humans.*' (SNNPR, Yayike *kebele*, FGD with adult women). It is arguable that reductions in meal frequency and quantity, as well as substitutions, is a coping strategy as much as it is a short-term impact. We have included it in this section because it reflects the perspective of the study participants, who tended to refer to consumption reduction as an impact.

Interestingly, because both staple and prestige or priority foods vary across the five study regions, shifts and substitutions take on different contextual meanings: in Amhara, *teff* is prized for the preparation of *injera*, and the shift to sorghum was viewed as a negative coping strategy; meanwhile, in Tigray, sorghum is one of the traditional ingredients for *injera*, and during the drought some families shifted to wheat provided as food aid: '*For example, in a normal year our staple food is* injera, *made up of maize and sorghum. However, after the drought we started to eat bread and* injera *prepared from wheat received from PSNP and emergency supports of the government.*' (Tigray, Gurwure *woreda*, FGD with adult men). In agro-pastoralist SNNPR *woreda*s, respondents lamented the loss of legumes in their diet, while in pastoralist Afar being forced to consume legume-based *shiro* instead of dairy products was regarded as a negative coping strategy (Box 9).

Box 9 Reductions in dairy products

> '*The drought had the biggest impact in our lives because of lack of milk and milk products which is the main ingredient of our families' food. During the drought time we found it very difficult to accustom with* shiro *and pepper replacing milk and milk products, especially for young children. Our families purchase* shiro *and pepper directly from the market which are neither tasty nor nutritious.*' (Afar, Tirtira *kebele*, FGD with older girls).

According to KIIs carried out with health personnel at *kebele* and *woreda* level, livelihood-led dietary impacts of the El Niño drought translated into critically negative nutritional outcomes in all the study regions. Surveilled groups (pregnant and lactating women, children under five) suffered from severe and moderate acute malnutrition across the study sample. In Amhara's Sivilkay *kebele*, the Health Extension Worker observed that '*In 2015, the majority of children and mothers were malnourished*', adding that 177 of the 318 children in the *kebele* were reported as malnourished—some severely enough to be admitted to the stabilisation unit at Hara Health Centre, outside the *kebele* (Amhara, Sivilkay *kebele*, KII with Health Extension Worker). This situation was not unique to Amhara: similar findings emerge across the study sample. In Oromia's Faji Gole *kebele*, for example, the Health Centre Head stated that in the drought year, 26 children in the *kebele* suffered such severe acute malnutrition that they required in-patient care. In Tigray's Adishum Bereket *kebele*, the Health Extension Worker reported '*significant increases*' in malnourished children and pregnant and lactating mothers. The Dulecha *Woreda* Health office in Afar reported levels of 3.6% and 21% of severe and moderate acute malnutrition, respectively, placing it in the World Health Organization's critical category. While acute malnutrition management protocols were in place, and plumpy nut and other ready-to-use therapeutic foods were made available without charge to severe and moderate malnutrition cases in all regions, the fundamental food security problem remained unresolved.

While there are other important drivers of poor school attendance and school drop-outs, chiefly related to work, migration, and travel in search of better grazing lands, lack of food was also cited as a negative factor affecting school attendance and performance. Children across the regions spoke of the challenges of going to school hungry (see Box 10 below). Other children noted that they had been afflicted with an itchy skin condition as a result of poor diet and hygiene, and had therefore not wanted to attend school. Skin problems were prevalent in Amhara and Tigray, but not the other regions. Another factor said to constrain school attendance was the lack of household money to buy school materials such as notebooks and pencils. Some short-lived but effective efforts were made to counter this trend by distributing free school materials in some study *kebele*s.

Box 10 Attending school with hunger

> '*I was coming to school without having my breakfast. Though I came to school like others, I was not interested to attend to what our teacher said…I was at school one morning without having my breakfast. I was hungry and felt weak. I sat in the compound alone waiting for the bell to ring. But I felt terrible when I saw others running and playing in the field. I silently cried for few minutes. I hate the area, the kids playing in front of me, and myself. I slowly walked to my home.*' (Amhara, Sivilkay *kebele*, FGD with older girls).

5.1.3 Domestic water supply impacts

In addition to the impacts of the water shortage on agriculture and livestock activities, the El Niño drought also affected domestic water supplies used for drinking, cooking, washing, and personal hygiene across all the study *kebele*s. This had both direct impacts and also impacts associated with coping strategies – in particular, related to the need to bring water to the home from ever-more-distant sources. The most salient direct impact of the drought was a lack of water for drinking and cooking: this, coupled with the rise in temperatures, exacerbated thirst and dehydration. Drinking, washing, and cooking with dirty water became the norm in all the *kebele*s studied. Because water often needed to be brought from remote sources, and was in critically short supply, drinking and cooking were prioritised, and personal hygiene and clothes washing were reduced. In Amhara and Tigray, respondents referred to the prevalence of an itchy, irritated skin condition, which they believed resulted from washing in dirty water, a lack of clean clothing, and poor diet. In a HHCS interview in Amhara's Burkoch *kebele*, the informant (a young boy) summarised the situation for the researcher, who recorded the account presented in Box 11.

Box 11 The impacts of a reduced water supply

> '*Before the drought, they [children] would fetch water from a river or spring 15–20 minutes away from their house. But during the drought, the spring and the river dried up, and they were forced to walk for more than two hours to find water. Previously, before the drought, they would wash their clothes once a week or once every two weeks, but during the drought, they were unable to wash their clothes, which became very dirty. Because their clothes were so dirty, they suffered from skin diseases. Almost all the community suffered from these skin diseases. They believe that these resulted from a combination of poor diet and lack of hygiene. Before the drought, they drank pure water; during the drought, they were forced to drink muddy water.*' (Amhara, Burkoch *kebele*, HHCS interview with young boy).

Across the study sample, respondents also noted an increase in gastrointestinal illnesses and diarrhoea during the drought period: it is likely that this was attributable to a combination of limited personal hygiene resulting from water shortage, contaminated drinking and cooking water, and the fact that open defecation is the norm in these communities. In Tigray's Adishum Bereket *kebele*, young children made the point in an FGD that that the prevalence of water-related illnesses also contributed to school absenteeism (see Box 12 below).

Box 12 Experiences of gastrointestinal diseases

> '*In our village there are common diseases that repeatedly affect children, like skin disease, stomach ache, and diarrhoea. Especially diarrhoea is common while we were fetching water from unprotected springs and many children were infected by the disease. When we get sick we stop going school and we don't eat food.*' (Tigray, Adishum Bereket *kebele*, FGD with younger children; four of the children confirmed that they had been affected by diarrhoea).

In absolute terms, then, the direct, physical, short-term impacts of the El Niño drought (those which are not principally the result of a coping strategy) on children's well-being are simple and revolve mainly around quantity, quality, and frequency of food consumption, together with the effects of domestic water shortage: thirst, poor hygiene, and related health issues. While the examples above demonstrate some variation in specific effects (loss of dairy products in pastoralist areas, shifting to less desirable dietary staples in

agro-pastoralist and agriculturalist zones), in general terms these are key direct threat areas, regardless of livelihood type.

5.2 Research Question 2: Coping mechanisms and effects on children

What were the main coping mechanisms used by the most vulnerable households to respond to the El Niño drought, which could have affected, and did affect, children?

Families employed a range of coping strategies and mechanisms in their efforts to mitigate the worst and most immediate impacts of the El Niño drought. For the most part, these strategies were oriented towards alleviating the acute shortages of food and water for humans and animals, as well as towards injecting money into the domestic economy or reducing drains on it by cutting consumption and expenditure. Few of these coping strategies were in fact 'new' responses to the El Niño drought; instead, the majority were strategies either used before in other droughts, or simply intensifications or transformations of existing approaches to chronic poverty, seasonality, and their ramifications in terms of food security and livelihoods resilience. An example of this tendency is extra-community economic migration. The pattern of older boys leaving their *kebeles* to seek work elsewhere, whether in more urban areas or agri-business zones, or other areas with greater economic opportunities within Ethiopia, or indeed farther afield, in the Gulf States or other international destinations, was not an innovative response to the 2015–16 El Niño: it was a long-standing tradition which underwent some transformation during the recent drought, becoming more intense (in terms of the period spent away from home), and more imperative (in terms of the pressure to respond to a greater-than-usual need).

This may help to explain why migration is *not* flagged as a coping strategy in the ESS data on coping strategies adopted in drought-affected households[54]. If economic migration is conceptualised by ESS respondents as a quotidian economic strategy, rather than a shock-responsive coping mechanism, then the survey finding makes sense. The same argument may be made of transhumant migration in search of better pasture and water access for livestock: this is by no means a new phenomenon among pastoralists and agro-pastoralists – it was a seasonal strategy long before the drought came[55]. But the El Niño drought forced herders to travel farther away than normal, for longer periods, because the drought was more severe than a normal dry season. In Tirtira *kebele*, in Afar, the community leader stated: '*We were reunited with our wives and families only when it started to rain [when the drought was over].*' (Afar, Tirtira *kebele*, KII with community leader).

5.2.1 Migration, transhumance, and work

Analysis of field data from interviews, case studies, and FGDs points to some broad patterns in the type of migration engaged in. Unsurprisingly, these patterns vary across the study *kebeles* and relate chiefly to the dominant livelihood type in each *kebele*. *Kebele*s primarily oriented towards pastoralist livelihoods (both Afar *kebele*s, as well as Haro Kersa in Oromia) did not *generally* report economic migration, favouring instead transhumance: although there were isolated references to involvement in income-generating activities, these were rare and indeed culturally proscribed in pastoralist *kebeles*. The research results suggest that while the practice of transhumance was not new, the particular exigencies imposed by the El Niño drought nonetheless increased the impact on children's well-being, particularly in the older boys stratum.

Study participants from the Afar *kebeles* travelled to sites in Amhara, Oromia, and Tigray in search of better pasturelands and water access for their camels. In the case of Tirtira *kebele*, some pastoralists travelled with their camels to a nearby sugar production area, where the herds were able to feed on sugar cane by-products: '*We migrate to Fentale woreda of Oromia region to search for grass for grazing. We also went to Awash Melkasa sugar factory. The factory provided us with sugar cane to use as a feed for our livestock.*' (Afar, Tirtira *kebele*, FGD with adult men)[56]. Respondents from an older girls' FGD in Tirtira noted that this transhumance was carried out by men and older boys, and did not involve women or younger children; however, younger children in the same *kebele* stated that in some cases, whole families moved in search of water and pasture.

Older boys' important participation in transhumance in Afar, as well as in agro-pastoralist *kebeles*, was flagged as a key factor in discontinuing school: participants in an older boys' FGD in Afar's Addu *kebele* related this

[54] Table 5.1, Generation El Niño: Long-term Impact on Children's Well-being. Quantitative Assessment of Households Affected by the 2016/15 drought (OPM and HESPI, 2017c).

[55] Technically, moving livestock on the hoof in search of viable pasturelands or better water access should be classified as seasonal transhumance, not migration; it is especially characteristic of pastoralist societies. We have elected to address data on transhumance alongside data on migration in order to better reflect the fact that respondents did not make a categorical distinction between the two, but tended to describe transhumance in terms similar to those used to describe economic migration. It is also true that while transhumance and economic migration are in many ways very different patterns of movement, they nonetheless have common effects upon households, such as drawing fathers and older sons away from the home kebele.

[56] This is an interesting response in the light of the fact that Fentale woreda was identified as a hot spot and was selected for this study. As described below, Oromo pastoralists from Haro Kersa kebele in Fentale woreda themselves practised transhumance, traveling with their herds in search of better pastures and water.

to the 2015–16 El Niño drought and the reduction in animal feed. Another participant in the same FGD also emphasised the relationship between the drought and their increased responsibilities in seeking food and water for their livestock (see Box 13 below). Responses such as these support the argument that although seasonal transhumance is a tradition that pre-dated the arrival of El Niño, the added burden of the severe drought intensified the need and responsibility falling on older boys. Distances travelled in the search for water and pasturelands were also said to be longer than in non-drought years.

Box 13 Transhumance and the impacts on children's workloads and time

'*In 2015/2016 because of the drought and reduction of animal feed in our community our time spent looking after big animals (camel and cattle) is increased by migrating to other places where located in remote areas out of our community. As the result of the drought all [of us] except [Participants 3 and 5 indicated], we have been migrated to Tigray region and dropped out of school.*' (Afar, Addu *kebele*, FGD with older boys).

'*We boys have more work burden in relation to looking after our family's livestock and our work burden becomes heavier in the time of drought in relation to migration to other places in search of feed and water for our livestock. Such responsibility usually forced us to drop out of school and the result is shown in the low enrolment rate boys in school.*' (Afar, Addu *kebele*, FGD with older boys).

In Oromia's pastoralist Haro Kersa *kebele*, transhumance is practised in a similar manner: again, we note that this movement of people and herds is calibrated to drought: '*In the past, they moved around every seven to eight years because the drought used to come every seven to eight years, but now the drought is more frequent and is occurring every year*'. Study participants from this *kebele* were also especially careful to emphasise that sending children (or indeed other family members) away as economic migrants was not an acceptable coping strategy in their community. One adult men's FGD participant stated: '*A family that sends its child/children out to other places to become involved in labour work of any kind will be cast out from the community.*' (Oromia, Haro Kersa *kebele*, FGD with adult men). KIIs carried out with Health and Agriculture Extension Workers in this *kebele* were congruent with the responses received from FGDs and HHCS interviews: in general, families move together.

In the agro-pastoralist *kebeles* of Burkoch and Sivilkay in Amhara, Maddo Mukanekka and Yayike in SNNPR, and Gurwure and Adishum Bereket in Tigray, and the predominantly agricultural *kebele* of Faji Gole in Oromia, people adopted mixed livelihoods coping strategies: where livestock was held, some transhumance was also practised during the El Niño drought period, but to a much more limited degree than in Afar or in Hero Kersa *kebele*, reflecting the fact that while important as food sources, assets, and draught animals, livestock do not occupy as prominent a position in these mixed-livelihood *kebele*s as they do in pastoralist zones. While respondents in pastoralist *kebeles* emphasised that their principle livelihood response to the drought was to do as they had always done in times of drought—move their camel and other livestock herds (often with their families) to better grazing and water sources, in other words going to great pains to avoid destocking or slaughter—livestock owners from mixed-livelihood *kebeles* instead employed a wider range of options. These included destocking through sale and slaughter of larger animals, such as oxen and cows – a strategy which was not discussed among pastoralist respondents. Smaller animals, such as goats, did not require transhumant measures.

Some transhumance was practised in the Amhara *kebele* of Burkoch, where men and older boys travelled with their cattle to the Tekeze River, as explained in notes taken during an HHCS interview carried out with the older son of one family (see Box 14 below). It is worth noting in relation to this excerpt that the migration referred to was a traditional transhumant movement which pre-dated the El Niño drought. As in the cases of the pastoralist *kebele*s described above, the transhumance which was engaged in during El Niño was not an innovation, but a time-tested response to episodic drought conditions. While transhumance emerges much less in responses from other agro-pastoralist or agricultural *kebeles*, it is mentioned in Tigray's Gurwure *kebele*, where there was also some movement of herds to the Tekeze River area.

Box 14 Transhumance in Amhara

> '*The informant also described how he usually engages in walking five hours to graze cattle around Tekeze River, where better feed and water is found. As farmlands are covered with crops herding cattle around the village in the rainy season is hardly possible. Lack of grazing land for cattle during the farming season oblige families to send their cattle to Tekeze River, which demands time and effort of older boys and their father in going back and forth to look after the cattle in that place. According to the informant, he and his father will look after their cattle from mid-June to October.*' (Amhara, Burkoch *kebele*, notes from HHCS interview with older boy).

The practice of transhumance has important implications for children's well-being. In Haro Kersa *kebele*, in Oromia, the 14-year-old daughter of the case study household would be left in charge of her two younger siblings every time the family took their herd to seek water and pasture in the dry season or drought, travelling by herself with the two youngsters to her parents' location every weekend. Alongside these responsibilities, she was also attending school – and had completed Grade 8, with intentions to continue to Grade 9 – but this involved travelling to Metehara. In Amhara's Burkoch *kebele*, the urgency and intensity of the transhumant response was said to have contributed to older boys being withdrawn from school—generally permanently, given that on their return to their *kebeles* these boys often did not want to re-join their classmates, even if this option was still available; it also meant that older boys and fathers were away from home for longer periods of time. This, combined with the fact that women and older girls needed to travel to more distant locations to fetch water for domestic use, resulted in younger children being left at home for more extended periods. During these periods, younger children were obliged to undertake some domestic tasks which would normally have been the responsibility of women and older girls (13 and above) in the household, such as preparing food and house cleaning.

Children expressed their worries that their fathers or older brothers might not return from their journeys in search of grazing and water. Older boys spoke of their own concerns about safety and security during transhumant journeys. Security concerns in the truly pastoralist *kebeles* tended to revolve around a different set of issues related to internecine conflict between clans, rather than around the risks faced by unaccompanied children. For example, an older boy interviewed for a HHCS in Afar's Tirtira *kebele* made the point that such conflicts increase at times of drought: '*Clan conflict is our major risk. In our community we have repeated conflict incidents among different clans and these caused instabilities for the whole community. Conflicts usually increase whenever drought incidence occurs, to compete with limited animal feed and water resources. During clan conflict looting and attacking of livestock, restrictions of movements for livestock and people as well as injury and killing of people are common.*' (Afar, Tirtira *kebele*, HHCS interview with older boy). In Oromia's Haro Kersa *kebele*, the Health Extension Worker made the point that clan conflict increased in drought episodes because of the need to seek pasturage and water outside of the traditional territories of each clan, possibly encroaching on that of a rival clan.

Box 15 Mistreated: experiences during economic migration

> '*In the place where they migrated the people who employed them as workers in their houses never treated them well, like giving them very small amounts of food, insulting them, kicking them. They couldn't make any friends in the place where they migrated. They are treated as inferior. At this time the migrated children feel loneliness and hate themselves. As one boy told us "they hate living in this world and prefer to die"*'. (Amhara, Burkoch *kebele*, notes from a FGD with older boys).

In agro-pastoralist and agricultural *kebeles*, economic migration was found to be much more common than transhumance. However, we again note that while the specific nature of economic migration (in terms of destinations, duration, age of migrants, inevitability) may have intensified as a result of the El Niño drought, there is a pre-existing tradition of economic migration out of communities: to agribusiness sites, to more urban communities or cities (including Addis Ababa, a destination for some Tigray boys), or in some cases farther afield, to overseas locations such as the Gulf States. Traditionally, these migrants tend to be older boys and men, who send remittances home. Remittances were even more important during the El Niño drought, and in one *kebele* (Burkoch) we were told that prior to the drought, older boys who travelled away to work would keep their wages for their own use, or save them for married life, whereas during the drought, remittances were pooled in the household budget. As in the case of transhumance, we would argue, based on our field data findings, that economic migration in the non-pastoralist study *kebeles* was not itself a coping strategy because—like transhumance in pastoralist *kebeles*—it was already part of the livelihoods repertoire before the El Niño drought struck. The effect of the El Niño drought was to convert, through intensification, a quotidian economic practice into a coping strategy to

address acute needs. This echoes the analysis of the 2013/14 and 2015/16 ESS waves, which show a clear increase in pre-drought participation in waged work for both males and females (greater for males).

A key dimension of this intensification, which is particularly relevant to children's well-being, was the widening of the age range of economic migrants, to include younger children, rather than just men and older boys. The involvement of younger children in extra-*kebele* income-generating activities was found to a greater or lesser degree in all the non-pastoralist *kebeles*, as illustrated by the excerpt given in the box below, from a FGD held with adult women in SNNPR's Maddo Mukanekka *kebele* (see Box 16).

Box 16 Younger children and economic migration

'*Children, starting from the age of 10 years, are being involved in different income-generating activities, mainly by going out of the communities to urban areas like Addis Ababa, Hawasa, and other places. They are mainly involved in daily labour, including: loading-unloading activities, cart driving, roadside/mobile petty trading, and in construction projects. Mostly they migrate to other areas starting from February and stay till the rainy season, dropping out from schools. This time is when there is no rain and is a period with severe food shortage. When they come back, some of those who dropped out of their schooling will re-join it if they come prior to the closing of schools, while others do not.*'

'*Children working face several problems. They cannot find houses to live in easily. Some of them don't have identity cards so that when they go to other places they can't rent houses. As a result, they are obliged to live on the streets and in ditches. We are highly worried that they might be eaten by wild animals or they might be taken by flood incidences. There were also cases when some of the migrated children become sick and the parents were obliged to go and bring them back. There were also cases when some of the children were attacked while they lived on the street.*'

'*The migration of children to the urban areas, in fact, has some benefits for the children and their families. There are cases when the migrated children support their families through sending money for the purchases of fertilisers, improved seeds and staple foods for consumption.*'

(SNNPR, Maddo Mukanekka, FGD with adult women).

In some, though not all, non-pastoralist *kebeles*, girls also began to migrate as an income-generating coping strategy. In Oromia's Faji Gole *kebele*, older girls reported in an FGD that in hard times, they would travel to urban areas to work as housemaids, earning some 250–300 Ethiopian Birr (ETB) per month. In Amhara's Burkoch *kebele*, '*children were required to work more during the drought. Children aged 10 were sent to the city for work. Girls went to the nearby city to be nannies and domestic workers, and boys also went to the nearby kebele and contracted themselves out as cattle herders and temporary agricultural labourers. Children have started to work for those who are better-off in the community.*' (Amhara, Burkoch *kebele*, FGD with adult women). However, in Amhara's Sivilkay *kebele*, the migration of girls to nearby urban areas is strongly proscribed, although in some cases older girls/young women are encouraged to travel to the Gulf States to work as servants. Economic migration to the Gulf States was a highly salient reality in this *kebele*, but, interestingly, was not described as a viable coping strategy for the poorest and most vulnerable victims of El Niño or other climate shocks, chiefly because migrating to the Gulf States requires significant resources: financial (ETB 150,000 per head for illegal or 'unofficial' migration), and ideally social (existing networks of family in the destination country). In general, migration was facilitated through the financial and logistical support provided by family members already living in the Gulf States, thus simultaneously fulfilling needs for both economic and social capital. Illegal migration to the Gulf States also entails a high degree of risk, because would-be migrants must put themselves in the hands of traffickers, who may or may not engage in extortion.[57]

5.2.2 Work and time use closer to home

In this section, we turn to the issue of children's work closer to home. Migration and transhumance are key strategies which have direct impacts on the primarily older children involved in them—though, as discussed above, neither migration nor transhumance was an innovation in response to El Niño. With the exception of a smaller number of cases where younger children migrated from their communities to work, much of the drought's short-term impact on younger children revolved around their time use, and involvement in coping activities closer to home. Impacts were also mapped out on gender lines because of the inherently gendered division of labour in the households: collecting water became more difficult for women and girls, while migration and transhumance 'intensified' for men and boys.

[57] One participant in an adult men's FGD in Sivilkay kebele shared a particularly distressing account of people smugglers ransoming his 14-year-old son, who was held against his will and physically abused in order to force the family to pay an ETB 80,000 ransom. This case was resolved, and the boy returned, but it required the family to take out a loan for this payment.

Once again, the field data reveal a marked difference between the results from pastoralist *kebeles* and those from mixed or agriculturalist *kebeles*. In Afar, while children were said to participate in domestic chores, we found few cases of children's involvement in income-generating activities. In Tirtira *kebele*, the 17-year-old daughter of the case study household was involved in selling firewood and charcoal, and had considerable autonomy in these activities. In her interview, she recounted that she enjoyed selling firewood and charcoal in Dulecha market, in spite of the 25 km journey required to get it there. She also engaged in basketry work, and noted that in response to the drought, she began to work every day on income-generating activities. Interestingly, in Afar, a participant in an adult men's FGD made the point that after the drought, boys worked less because their traditional workload would have included animal herding—and now, with herds depleted, there was less of this work for boys to do. However, girls' workload, which includes water-fetching, increased because of the water shortage and the need to travel farther afield to bring water. It is debatable, however, whether boys' workload indeed decreased with herd depletion, given what we learned about increased distances and duration of transhumant trips, because good pasturage and water access were remoter than before the drought, even if herds were smaller. According to an education supervisor interviewed in Tirtira *kebele*, school absenteeism rose among both girls and boys: in the former case, because of the greater time investment involved in fetching water, and in the latter case because of the greater distances involved in transhumant journeys. This was summed up by a respondent in an FGD held with older girls in Afar's Addu *kebele*: '*There was no change in the daily activity of children during the drought but the difference was travelling long distance to search for water. We girls travel longer distances to fetch water and fuel wood for our household consumption. Boys were also travelling longer distances to search for grass and water for livestock*.' (Afar, Addu *kebele*, FGD with older girls). An interesting peripheral point to emerge from this same discussion was that because of the drought, there was less food to cook, so fuel and water for cooking were required in lesser quantities than in non-drought times.

Fetching water from ever-more-distant sources was an inevitable strategy in all *kebeles*. This work was almost exclusively done by women and girls, although at times boys and younger children also participated in this activity. The need for long journeys, or long queues at water points, had numerous implications for children's well-being. The first of these relates to the physical hardships involved in carrying water over long distances. Respondents across the study sample reported that instead of being able to access water from sources less than an hour (and often a few minutes) from their homes, they were now forced to undertake journeys of several hours, in very hot and enervating conditions. As the younger son of the HHCS in Amhara's Sivilkay *kebele* stated: '*Children fetching water from the long distant place were suffering from headache and back pain.*' (Amhara, Sivilkay *kebele*, HHCS interview with younger boy). In Afar's Addu *kebele*, an older girl interviewed for the HHCS noted: '*I spend more time on searching for water for my household. The time needed to fetch water almost doubles during the drought period.*' (Afar, Addu *kebele*, HHCS interview with older girl).

Younger children were also left unsupervised and unprotected at home when their mothers and elder sisters travelled to collect water, and expressed worry about when they might return. Added to these impacts on childhood well-being was the problem of security, as reported in this excerpt from an FGD carried out in Amhara's Burkoch *kebele* with older girls: '*According to our participants, they fetched water from the river and springs found in the nearby area, some 10 to 15 minutes away. During the 2015–2016 droughts all the nearby rivers and spring water dried up and they were unable to find water, so ladies were forced to travel long distances, up to two hours on foot, crossing through bush to fetch water. At this time, girls were exposed to different types of sexual abuse. One girl told us, "The girls living in the other kebele were getting abducted when they went far away to fetch water." To protect against such problems, girls were travelling together when they wanted to fetch water.*' (Amhara, Burkoch *kebele*, notes from FGD with older girls).

While water collection impacted children to greater or lesser degrees in all the study *kebeles*, their participation in local (as opposed to migratory) waged work was, with very few exceptions, only a feature of the non-pastoralist *kebeles*: in both Amhara *kebeles*, both Tigray *kebeles*, both SNNPR *kebeles*, and Oromia's Faji Gole *kebele*, children (particularly children considered too young to migrate to remoter locations) participated in opportunistic waged work, doing a range of small jobs for low pay. Such jobs were typically on local construction sites, or working as animal herders or agricultural labourers for nearby families, or selling collected or fabricated goods, such as firewood and charcoal. In Tigray's Gurwure *kebele*, artisanal gold mining offered some employment possibilities for older children. In Amhara's Burkoch *kebele*, some boys (even under 12 years) were paid to work on a local dam construction site: the school was open at the time but they were absent in order to work. In Sivilkay *kebele*, the younger boy interviewed for the HHCS took a job in the local area, tending the goats, cattle, and camels of another family: '*During the drought he went to somebody's house for work. He had a responsibility to look after 20 goats, four camels and nine cattle*

every day. He took them to the river at mid-day for drinking water. As a whole he spent the whole day in following up their movement. It was tiresome. As he said, "Sometimes it became out of my control and unable to look after them. At this time, I sat down on the shed of the tree and cried about my unluckiness of having this ugly life…I felt pain on my leg and back every day. It was very difficult for me to sleep at night because of the pain." Because of the workload he lost his school achievement and became the third in the class.' (Amhara, Sivilkay *kebele*, HHCS interview with younger boy). In Oromia's Faji Gole, researchers learned that children as young as five years old were involved in collecting straw for sale, and indeed waged labour was (and is) common among children. This situation is 'enabled' by the proximity of Faji Gole *kebele* to the *woreda* town: Shashamene Zuria is only 10 km away, and presents opportunities for low-paid waged labour in jobs such as manually grinding coffee and housework.

As we found for pastoralist transhumance, or economic migration to distant places, children's participation in local waged labour probably pre-dated El Niño, and has indeed continued in the years which have passed since the drought. What converted it into a coping strategy during the El Niño drought was the urgency and the widening circle of participation. In well-being terms, it is a problematic practice, however traditional it may be. It has negative effects on school attendance, exposes children to work and risk which they are sometimes too young for, and takes away children's 'free' time. This point comes across clearly in our HHCS interview in Burkoch *kebele*, with the younger son: '*Children's time has been affected by the drought. As he said, they had no time for playing with their friends due to workload come up from drought. Since his family engaged with fetching water and keeping cattle via travelling long distance, his responsibility of keeping cows and goats at home has increased and he spends the whole day at work. This had taken his time of playing and going to school.*' (Amhara, Burkoch *kebele*, notes from HHCS interview with younger boy).

5.2.3 Financial mechanisms: loans, debt, credit, savings, and asset sales

Box 17 Credit, debt, and repayment terms

> *The family borrowed ETB 5,000 from the ACSI [Amhara Credit and Saving Institution] during the drought, in order to buy sorghum. This sorghum helped them avoid selling their cattle for a low price. The terms of the loan were that they should return the capital + ETB 1,000 interest within one year. Repayment is one lump sum at the end of the year. ACSI is a government institution which makes loans, especially providing credit to farmers to improve their livelihood. If they fail to repay the loan, then they potentially forfeit cattle and land. This system is rigid and non-negotiable and creates anxiety. This family was able to repay the loan in time and did not default. The husband also said that some families who borrowed money from ACSI would, as the repayment date approached, take out other loans from their relatives so as to repay ACSI and avoid having their assets (even including the PSNP) confiscated. Once ACSI was repaid, they could then take out another loan and repay their relatives.* (Amhara, Burkoch *kebele*, notes from HHCS interview with adults).

In this section, we turn to financial coping strategies deployed to mitigate the worst short-term impacts of the El Niño drought. In a real sense, it is arguable that many coping strategies are at root financial, or economic, in nature, even when the lived effects of the strategy are not: in the case of the El Niño event, cash crop failure and livestock deaths resulted in lowered participation in agricultural or pastoralist value chains and concomitant loss of income; this, combined with widely-cited increases in the cost of basic foodstuffs, forced households to adopt consumption reduction as an economic coping strategy, one which had highly negative effects on available diets, as well as on families' ability to purchase other necessities, such as clothing and school materials. That said, in this section we will focus particularly on those effects that are related to the credit-loans-debt nexus, with particular reference to local financial institutions and services, to savings, and to asset sales. We will not discuss consumption reduction, because this was presented earlier. Waged labour, whether migratory or local, has been explored in the preceding section. Remittances are important wherever economic migration takes place, as noted above.

The first point to be made here is that there is no evidence on the use of financial services in the pastoralist *kebele* of Haro Kersa in Oromia, while respondents in both Afar

kebeles pointed to the absence of financial services: however, this turned out to be no longer completely true. In Afar's Tirtira *kebele*, the BIHISNU Women's Cooperative was established with the support of a large INGO in 2016. The organisation serves as a rotating savings and loan scheme, which among other things offers interest-free credit to women. This is a Muslim *kebele* and the availability of interest-free loans is important—and echoes a finding from Amhara's predominantly Muslim Sivilkay *kebele*. Note that BIHISNU did not exist during the El Niño drought. The second point concerns impacts on children's well-being. The situations we are discussing in this section, as regards financial mechanisms, affect children's well-being principally insofar as that well-being relates to the household economy—which of course it does. Strategies which are successful in mitigating the worst effects of El Niño will have impacts on children's well-being by making more money available for household consumption, and by reducing the negative impacts on diet caused by contraction in the domestic economy. Strategies which are unsuccessful in doing this, which, for example, increase household vulnerability by increasing debt and risking the loss of assets pledged as collateral in the case of default on loans, are unlikely to have positive childhood well-being outcomes, and in fact may have negative ones.

Financial coping strategies in the pastoralist *kebeles* in our dataset are traditionally oriented to the sale of livestock assets. Sale of livestock took place extensively across the study sample, the difference being that in mixed-livelihoods communities, it was one of several financial coping strategies, whereas in pastoralist *kebeles*, it was the only one. It should also be noted that, according to respondents in different *kebeles*, prices paid for livestock in markets during the drought were poor – lower than they would have been in non-drought times. Although there was no way of confirming this through secondary sources, this scenario makes sense if there was a sudden glut of livestock for sale in markets.

A range of financial institutions and services exist across the non-pastoralist study *kebeles*. These generally focus on savings and credit facilities, often with a 'productive investment' ethos, ostensibly mandated to provide access to credit to be used for investment in small businesses or agricultural inputs. An important finding was that during the drought, credit and loans were accessed by *kebele* residents, but were often used for immediate consumption purposes—as were the proceeds from livelihoods sales. In other words, the immediate financial burden imposed by the drought (i.e. the need to buy food) pushed people to use money which ideally should have been invested in productive activities as a short-term economic solution. This point was made by the Health Extension Worker in SNNPR's Maddo Mukanekka *kebele*: '*OMO Micro Finance Institution provides group lending to women and youth to start their own business. But during the drought, most people who took out loans spent on household consumption.*' (SNNPR, Maddo Mukanekka *kebele*, KII with Health Extension Worker).

Local or *woreda*-level credit and savings institutions are common. In Oromia's Faji Gole *kebele*, the *kebele* manager asserted: '*In 2007 E.C. [Ethiopian calendar; 2014 in the Gregorian calendar (G.C.)*[58]*, more than 500 households took loans from Oromia Credit and Saving Institution and Kendil Microfinance Institution to finance their farm-related expenditure, such as input and fertiliser. But the complete harvest failure in 2008 E.C. [2015 G.C.] led to high indebtedness among the community. As a result, many in the community have fled the* kebele*, fearing they will be sued and even have their assets—mainly land—confiscated.*' (Oromia, Faji Gole *kebele*, KII with *kebele* manager). These institutions also offer important savings services, and some respondents noted that now (at the time of research, not during the El Niño event), they saved regularly: in a Tigray HHCS, the family reported putting aside ETB 44 per month in the Rural Saving and Credit Cooperative. In Burkoch *kebele*, some beneficiaries of the PSNP save their transfers in the ACSI—which was the lender in the account given in Box 17 at the beginning of this section. We note that in the mainly Muslim Sivilkay *kebele*, it is not always possible, for religious reasons, for community members to access the credit offered by ACSI, because of the interest terms. (See also the discussion in the section on Research Question 3, on savings associations).

5.2.4 Social impacts and coping: marriage and social capital

How were social institutions, such as marriage, impacted by the economic shocks of the El Niño drought? What coping strategies were brought to bear on ritual and ceremonial activity? How did social capital help families to survive the drought? In this subsection we explore these questions with reference principally to field data. First, it is worth reflecting on the relationship between children's well-being and social institutions, particularly given that in many ways these institutional relationships could be interpreted as 'luxuries' that were irrelevant to the literal calculus of food security and livelihood shocks. This would be a mistake. We make this argument from the perspective of a well-being framework which has its roots in Amartya Sen's thinking on capabilities, taking account

[58] In this report we retain the statement of years in the E.C., which is seven years behind the G.C. However, we have indicated the G.C. date alongside where applicable, for clarity.

not only of (crucial) material needs, but also of the need for a social and affective environment which allows individuals to achieve their aspirations for a 'good life' (capabilities).

Institutions such as marriage are obviously key to processes of social reproduction, but they are also important because of the role they play in defining and protecting social organisation: structuring relationships between individuals, families, lineages, and generations, while also providing a template for an ideal social biography which is central to the life cycle. Social capital, or the density of social networks in a community, is also critical and, as we show below, can also have an instrumental value in buffering the effects of a drought shock. When such institutions are themselves threatened by shocks, there is a potential for destabilising effects on children's well-being because of the direct and negative effects on their social and affective environment. That said, it is also important to note that in all of the study *kebele*s (some more than others) there was a tradition of girls leaving school prematurely to get married—technically this is against the law, but appeared to be widely practised. In terms of children's well-being, this is clearly a very problematic practice, and it could be argued that delaying marriages because of the drought was not in fact a negative effect. In Afar communities, in particular, marriage arrangements can be set at birth, between cousins, a practice known as *absuma*. This can take on a coercive dimension in the future.

The data show two main effects of the El Niño drought on the institution of marriage. In a single case recorded in a HHCS interview with an older daughter in Afar's Tirtira *kebele*, the marriage was, in the view of the informant, 'accelerated' because of the drought: '*I feel that the drought has affected my aspirations [to become a teacher and live in urban areas] because I feel that the drought had accelerated my marriage to some extent. I believe that my uncle has facilitated my marriage in order to receive money from my husband in the form of dowry.*' (Afar, Tirtira *kebele*, HHCS interview with older girl). Note that because the respondent is referring to the Afar practice of *absuma*, or cousin marriage, her uncle who was anxious for the dowry payment would have been the father of the husband. The other coping strategy, more commonly reported in our field sites, was delay of marriages. This was found in both Amhara *kebeles* and in Tigray. In Amhara's Burkoch *kebele*, informants explained that traditional feasts and weddings had been cancelled because of the El Niño drought. In particular, there is a tradition of providing newly married couples with gifts of cattle or land—this became impossible under the El Niño conditions. The other factor which impacted marriages in Amhara was migration: older boys reported that some of their age cohort had been unable to marry because they had migrated far away for work. In Tigray's Adishum Bereket *kebele*, in an adult women's FGD, respondents observed that households restricted marriages initially (see Box 18 below). Also in Adishum Bereket, the year of the drought saw no marriages taking place, but then in the years immediately afterwards, more marriages than usual took place, according to the head of the Women's Association (see Box 18 below).

Box 18 Marriage during and after the drought

> '*In 2016, right after the drought, almost all marriage schedules in our community were cancelled and postponed to 2017 because of the drought's impact on our harvests that restricted households to prepare wedding ceremonies. As a result, we had many wedding events in 2017 (January–July), even sometimes we have been participated in more than two wedding ceremonies on a single day.*' (Tigray, Adishum Bereket *kebele*, KII with head of women's association).
>
> '*Because in 2007 E.C. there was no marriage due to the drought, in 2009 E.C. there were a lot of marriages of under-age and over-age. Because these individuals cannot follow-up on so many duties. There was no marriage due to drought, but now in 2009 E.C. during the good harvest it has increased.*' (Tigray, Adishum Bereket *kebele*, FGD with adult women).

As noted above, social capital was an important dimension of coping with the El Niño shock. In Afar, in particular, numerous informants strongly emphasised the importance of social networks and the inherent solidarity characteristic of their clan-based society. As the Tirtira community leader noted: '*Since the Afar community is highly connected by clan and by blood, they have a tradition of helping each other. For example, they have the tradition locally called* Mikilae*, which means helping someone when he or she is facing a big problem*' (Afar, Tirtira *kebele*, KII with community leader). The strong solidarity among clan members enjoined strategies and behaviours likely to support positive outcomes in children's well-being, such as resource pooling and sharing, and providing support to the hardest hit families. Conversely, however, the same clan solidarity was an important dimension of blood feuds and vendettas.

In the non-pastoralist communities, varying degrees of solidarity were found. In Gurwure (Tigray), coffee drinking ceremonies – whilst not directly alleviating the impacts of the drought – provided an opportunity for community members to come together and '*get relief from the stress of the drought impact*' (Tigray, Gurwure *kebele*, FGD with adult men). In Amhara's

Sivilkay *kebele*, Muslim traditions of charity to poorer households were cited as an important redistributive coping strategy, although these practices became harder to sustain as the impacts of the drought took hold, even in the better-off households. Similarly, the practice of *ritban* in Tigray (mentioned in Adishum Bereket by adult men in an FGD, involving the preparation of *tella* and bread amongst vulnerable households to invite reciprocal support from others) was weakened during the drought, with people unable to support each other due to their reduced capacity. This point was also made in an FGD held with adult men in SNNPR's Maddo Mukanekka *kebele*, who pointed to declining ability to participate in communal support activities (see Box 19 below).

Box 19 Social networks and support during the drought

> '*The support provided from the better-off households to the vulnerable poor households is also declining and were not functioning effectively during the drought as the continuous and severe drought has been affecting the well-being of the households across the board since 2000 E.C. [2007 G.C.].*' (SNNPR, Maddo Mukanekka *kebele*, FGD with adult men).

In Amhara's Burkoch, informants pointed to less positive developments which were challenging traditional solidarity between residents, such as theft or accusations of food theft, as well as reductions in the amount of resource sharing which families were able or willing to engage in.

Institutions, such as Community Care Coalitions (CCCs) in Tigray and *iddirs* across regions (notably SNNPR), were able to mobilise some support for affected households but operated with limited scope in terms not only of the resources provided but also the number of households reached. In both Adishum Bereket and Gurwure in Tigray, community members referenced the establishment of CCCs a number of years prior to the onset of the 2015 drought. Yet these were relatively 'young' institutions and – whilst contributions and support were said to be gradually increasing (up to ETB 24 contributed per household during the drought year) – community leaders in Gurwure reported reluctance amongst households to be members: '*there is appreciation, but in terms of encouraging membership a lot remains to be done.*' The support provided by the CCC was not insignificant – importantly, it targeted the elderly, orphans, and people with disabilities – but it was limited. Reports varied, but community leaders in Gurwure indicated that seven households were supported with ETB 250 as a one-off payment, with provision of free labour services (such as ploughing) provided by 17 households and directed to people who were unable to undertake work. Similarly in Adishum Bereket, mobilisation of contributions of ETB 24 enabled the CCC to provide support to 16 students, including sharing of school exercise books and clothes (Tigray, Adishum Bereket, FGD with adult women).

In SNNPR and Oromia, *iddirs* were generally described in terms of their function in providing support to households with funeral expenses. Where they existed, their significance remained important and there were no specific indications that they stopped functioning during the drought (beyond the general suggestions that resources and sharing mechanisms were broadly constrained due the extent to which households were affected, as outlined above). Indeed, there were some indications that *iddirs* continued to provide one of the main social bonding mechanisms: '*as our fathers told us there was a strong social bond in the community in the old times…But now I would say we lack such strong support systems, other than* iddir.' (SNNPR, Boricha, Maddo Mukanekka, KII with Agricultural Extension Worker). However, whilst the *iddir* structures seemingly retained their importance during the drought, in the provision of in-kind and cash support to families of the deceased (e.g. burial, contributions of maize, money for medical treatment), there was limited evidence that these institutions were able to mobilise additional resources for broader coping, beyond an indication that small loans are provided in response to any kind of crisis and for a short period of time (SNNPR, Mirab Abaya, Yayike, KII with Agricultural Extension Worker).

5.3 Research Question 3: External support and influence on well-being

What forms of external support were provided in response to the El Niño event and how did they influence children's well-being? How could external support be designed and delivered in a manner that has the greatest impacts upon the immediate well-being and future resilience of affected communities?

In this section, we will focus on the first part of Research Question 3, and consider the external support provided in response to the El Niño drought. Findings of relevance to the second part of the research question are addressed in Section 4 above, in terms of coordination structures and early warning. We have chosen to divide the response in this manner because, unlike Research Questions 1, 2, and 4, which focus on impact and coping, Research Question 3 focuses on the provision of services and support, together with the uptake of these. This question thus splits most logically into two strands: the conceptual logic of the El Niño

response, combined with supply-side issues related to delivery and implementation, and the demand-side strand, focusing on reception, uptake, and experience of the different interventions comprising the response. This section focuses on the latter.

In particular, the subsections below focus on a different form of external support provided to residents of study *kebeles*. Some interventions were explicitly focused on addressing children's needs, and many others sought to benefit children indirectly by improving the well-being of parents, households, and communities. Overall, and in all research communities, aid played a critical role in mitigating the impacts of the drought on vulnerable households generally, and on children in particular. In various cases, the arrival of aid in 2016 was significant in easing the severity of household situations – with community members in Gurwure and Guba Lafto emphasising that things had been worse in 2015 because of the lack of aid. The final subsection included here focuses not on emergency responses to the drought but upon development-oriented interventions which took place around the time of the El Niño drought—shortly before, during, or soon after. These interventions were not focused so much on mitigating immediate drought impact, but upon longer-term development objectives: in this sense, they fit into the resilience rather than the relief paradigm.

5.3.1 Livestock feed

Large-scale provision of supplementary livestock feed was a notable feature of the response, and a clear indication of lessons being learned from previous drought episodes, where the collapse of livestock assets had deprived pastoralist and agro-pastoralist communities of both their current income and their means of recovery. Women in Gurwure and Addu *kebeles* said that livestock feed was among the most valuable forms of support received, a perspective reflected by other respondent groups and across locations. Livestock vaccinations and medicine were also freely provided in several cases. However, it was also widely reported that the feed was delivered too late, with men in Dulecha indicating that by the time the feed arrived in January 2016 their animals were already weakened and it '*didn't prevent our livestock from death*' (Afar, Dulecha, FGD with adult men). Similar observations were made in Afar's Addu and Tigray's Gurwure *kebeles* – in the latter, feed arrived in April, by which time many animals had either died or been sold (Tigray, Gurwure *kebele*, FGD with adult men). In Addu, a household head explained that relief aid only arrived after the rains had failed, by which time livestock were starting to die and people were beginning to starve. He emphasised that for pastoralists it was very difficult to cope once their livestock died (Afar, Addu *kebele*, HHCS interview with adults).

Communities and local government described in several cases how livestock feed was procured locally, often in cooperation with local businesses. In Oromia and Tigray, feed was acquired from the by-products of sugar and beer factories, respectively, as well as from and wheat mills. *Woreda* officials in Afar described how local NGOs and private companies played an important role in the distribution of livestock feed, as well as procurement and provision.

Pastoralist communities in general emphasised how closely dependent their own well-being (and that of their children) was upon the health and numbers of livestock. This dependency is multifaceted, including food security, as described in the response to Research Question 1, (where milk is particularly important for children's diets), as well as sources of income. In fact, in both pastoralist and agro-pastoralist *kebeles*, livestock is a key asset: in addition to providing milk, and at times meat, livestock herds represent the savings of their owners—literally money on the hoof. Furthermore, in agro-pastoralist communities, larger animals, such as oxen and donkeys, play a vital role as draught animals, while camels and other large ruminants are also used as beasts of burden, carrying loads, such as water containers, firewood, and goods being brought to markets. Distribution of livestock feed was therefore widely welcomed as a way of staving off, or at least delaying, herd depletion. However, the late arrival of the feed, and possibly the amount distributed (which was described as insufficient in an FGD carried out with adult women in Gurwure) limited its value as a coping strategy: in the response to Research Question 2 above, we note that the transhumant travel had increased in all *kebeles* where livestock was a critical asset (the exception being Oromia's Shashamene Zuria). The implication of this is that in spite of the provision of animal feed, people were still forced to take their larger livestock in search of pasture and water. This point was supported in an FGD with adult men in Afar's Addu *kebele*, in which a respondent said that '*The animal feed supply, especially concentrated feed—wheat bran—was quite helpful in maintaining our small ruminants [sheep and goats].*' (Afar, Addu *kebele*, FGD with adult men).

5.3.2 Emergency food relief and PSNP transfers

Emergency food relief

Food aid was the most commonly mentioned form of support, with communities – including Burkoch and Addu – reporting that it had played a critical role in mitigating the impact of the drought. Several communities were already receiving food and nutritional support prior

to the drought, through enrolment in the PSNP or other programmes. Typically, households received a combination of wheat, pulses, and oil – though there were variations based on the location, the time of year, and the donor. Such support was critical for feeding household members, including, of course, children. Several respondents reported that food aid was regularly late. In Yayike, women said that they did not know when food aid would reach them, forcing them to sell their cattle to cover the food gap, which further depleted their household assets (SNNPR, Yayike, FGD with adult female). Although there is little doubt that food aid was a critical (and literally life-saving) front-line component of the emergency response, it needs to be registered that the food aid provided was not always sufficient—or timely enough—to prevent families from deploying the consumption-related coping strategies described in the responses to Research Questions 1 and 2: in spite of food distribution, families reduced meal frequency, size, and diversity.

Moreover, in terms of the influence on children's well-being, receipt of food aid did not always contribute directly to improvements in children's food intake. In Sivilkay, children reported that their parents sold some of the food aid they received to repay loans taken out to buy food and other things before the aid had begun: severe hunger began in September 2015, while the food aid arrived in December. Parents therefore borrowed money to bridge this gap. As a result, the amount of food they ate during the period of food aid continued to be very small and they lost weight (Amhara, Sivilkay, FGD with younger children). In Oromia's Haro Kersa *kebele*, the man interviewed for the HHCS observed that food aid was 'infrequent and unpredictable' (Oromia, Haro Kersa *kebele*, HHCS interview with adult). Children in this *kebele* also pointed out that reliance on food aid had subsequently caused their diets to change – and, as a result, they felt sad that their diets were now based on maize, instead of milk from their livestock. It is worth noting here that well-being impacts include affective ones—which can be triggered by a coerced change in cultural habits. In Burkoch, aid came in the form of sorghum, and children said *injera* made from sorghum was less palatable than *injera* made from *teff*.

School feeding programmes were widespread in 2016, and were generally appreciated for their success in both filling household food gaps and providing incentives for school attendance, both for children and their parents. Whilst in some *woreda*s, such as Megale, school feeding had been ongoing prior to 2015, coverage was increased in 2016, and the school director reported that school feeding provided '*the single most important incentive*' for parents to send their children to school. Teenage girls in Gurwure explained that, following school registration in September 2015, many children dropped out because of insufficient food and school materials, and others attended irregularly, as they spent one- to two-week periods working in local gold mines. Once school feeding started in the second semester, drop-out rates were significantly reduced and children started registering and attending – '*even children who didn't register and were long-time drop-outs wanted to go back to school because of the food support.*' (Gurwure, FGD with girls aged 13–18). In Addu, an additional incentive was provided to female students (and their parents), in the form of two litres of cooking oil per month and on the basis of regular attendance (Afar, Addu, FGD with adult women). Teenage girls in Addu said that this helped them to stay in school, at least until they got married, because their parents wanted to receive the cooking oil and therefore let them attend school (Afar, Addu, FGD with girls aged 13–18). School feeding was important for children's performance at school: children in Faji Gole and Sivilkay reported that going to school without breakfast made them feel ill and unable to concentrate. A donor representative interviewed for this study also said that school feeding provided a means of ensuring children got at least one nutritious meal a day, avoiding the creation of differences between children based on their ability to bring food to school. Indeed, it was suggested by female community members in Tigray's Gurwure *kebele*, and *woreda* education staff in Amhara's Ebenat, that school feeding should be a regular feature of education during non-shock periods as well, given its demonstrated positive effects on children's education and nutrition. as well as possible future developmental outcomes, as discussed in the response to Research Question 4.[62]

PSNP

A key objective in the response was to ensure that all those who needed food assistance were given it, either through the PSNP or through humanitarian relief. Many of the households participating in this research study were enrolled in the PSNP, either for direct or regular transfers. The cash or food assistance that it provided was welcome, and the scale-up in coverage and amount of support provided through 2016 was significant. For instance, in Gurwure it was reported that PSNP support increased from a six-month period to a 10-month period. In Ebenat, the *woreda* administration described using the PSNP contingency budget to extend coverage to households that were previously excluded. Community members in Gurwure and Boricha confirmed that the PSNP helped to fill the food gap, as is also indicated in secondary literature[63].

[62] Woldehanna, T., et al., 2017.
[63] For example: Favara, M., Porter, C., Woldehanna, T., 2017.

Women and men in Maddo Mukanekka said that the PSNP support was the best and most effective type of external support they had received (SNNPR, Maddo Mukanekka, FGD with adult females and adult males). However, the critical role that the PSNP and other forms of food aid played in sustaining households' livelihoods was underscored – pointing to generally low levels of resilience experienced. Adult women in Afar stated: 'without government support we cannot survive'. (Afar, Dulecha, Tirtira, FGD with adult females) and according to a teenage girl in the Yayike household, PSNP transfers were helping her family to survive the severe and recurrent drought (SNNPR, Yayike, KII with child aged 13–18). In Boricha, the household depended on PSNP cash transfers for six months of the year and struggled to deal with a rapidly growing food gap in the remaining three months (SNNPR, Boricha, Maddo Mukanekka, HHCS interview with adults) (see also Box 29).

PSNP support is not designed to meet children's needs specifically, but development partners involved in its design stressed that it may do so indirectly. In particular, it provides a per capita entitlement, rather than a household entitlement, and therefore does not treat children's needs as inherently less than, or encompassed within, adults' needs. While the programme does not influence how recipients use the support received, a key informant involved in the PSNP design pointed to efforts to ensure that women have a say over resource decisions and that children are not involved in public works. Although the Programme Implementation Manual for PSNP 4 indicates that children under the age of 18 are not eligible to participate in public works, there were indications that the PSNP could negatively impact upon children, particularly through its public works component[64]. The potential negative implications for children include (most obviously) school non-attendance, as well as the risks more directly associated with undertaking physical labour[65]. Community members in Haro Kersa mentioned that they sometimes send their children to fulfil their obligations on public works schemes when they have other obligations, such as fetching water. As discussed in the section on Research Question 2 these obligations are heightened in drought times, and the risk of child labour may increase as a result.

5.3.3 Health and nutrition

Health interventions were mainly implemented through the existing infrastructure of health posts and Health Extension Workers at the *kebele* level, as well as via mobile health teams in Afar region. Existing programmes, such as the Targeted Supplementary Feeding programme, were scaled up and new delivery modalities, including mobile health teams, were adopted. Partners in the nutrition cluster supported health facilities and teams, strengthened referral and screening systems, and provided resources for integrated management of acute malnutrition (IMAM) protocols (for instance, supplies of ready-to-use therapeutic food to cover 75% of estimated need were supplied by UNICEF and the zonal/district offices). Supplementary nutritional food, vaccinations, medicines for skin diseases, malaria and diarrhoea, soap, and other materials for sanitation and hygiene were the main types of health interventions mentioned. Provisioning of these items generally worked well, although in Tigray's Gurwure *kebele* the Health Extension Worker observed that they had suffered a month-long gap in supply of the Super Cereal supplement which they were providing to mothers and children.

Many interviews at community level referred to nearby health facilities that could provide at least some support to sick children, particularly during the emergency response. This type of assistance helped to avoid illnesses among children, and indirect impacts, such as non-attendance at school. Community members in pastoralist areas indicated that the mobile health services were helpful – young children said that they got treatment from these services when they were sick (Afar, Tirtira, FGD with children aged 7–12). In locations where communities were significantly dispersed, however, access remained a challenge – with the household in Addu, for example, indicating that even those services were too far away (Afar, Addu, HHCS interview with adults).

Adults were very familiar with the terms 'plumpy nut' and '*fafa* powder', and referred to such support as critical in supporting their children's needs. Significant improvements in malnutrition were attributed to this comprehensive approach – though, as discussed in the sections on Research Questions 1 and 2, they did not address the fundamental drivers (or in all cases, manifestations) of drought-related food insecurity. Health centre staff in Dulecha reported that weight and mid-upper arm circumference (MUAC) measurements were taken on a monthly basis for children under five, and for pregnant and lactating women, and treatment was distributed accordingly. Those who progressed from malnourished to normal MUAC ranges were given ongoing support for three months to try and prevent them slipping back into malnutrition. In Tirtira, concentrated nutritious food (*fafa* powder) was still

[64] PSNP, 2014.

[65] Young Lives research evidenced that public works could impact on children's workloads outside the home, as well as on their education, both through direct participation as well as indirectly as a result of having to take on additional work when their parents transferred their time to take on public works responsibilities (see: Tafere, Y., and Woldehanna, T., 2012; Young Lives, 2008).

being provided at the time of the research (Afar, Dulecha, Tirtira, FGD with adult women). Beyond these nutrition-specific interventions, nutrition-sensitive approaches in other sectors were mentioned by donors – in one example, an INGO provided feed to livestock, in the recognition that access to milk from health livestock is a critical component of children's nutritional intake.

5.3.4 Water supply

> '*…if we have water, we have everything…*' (Oromia, Fentale, Haro Kersa, FGD with children)

A variety of efforts to improve water supply and water conservation were evidenced in all *woreda*s as part of both the emergency response effort as well as longer-term development work. This included the construction of reservoirs, ponds, wells, canals, and dams. As an emergency measure, water trucking was undertaken in some of the study *woreda*s (including Ebenat, Guba Lafto, Fentale, and Boricha) for short periods of time. Such support was considered valuable by communities, though it was deemed to last for too short a time, and there was a general mismatch between demand and supply, which was particularly stark. It is worth noting that while water trucking was considered to be an important part of the emergency response, and may have reduced the dependency on women's water-fetching activities, it certainly did not eliminate the need for these. Water provision, in several study *kebeles*, was also important for the preparation of food for school feeding initiatives, and irregularities in water supply presented challenges to implementation of the school feeding.

Under drought conditions, activities in some cases sought to better adapt existing water supply infrastructure to current conditions, such as the reduced water table (for instance, by lengthening pipelines, deepening wells, and adding mechanised pumps). This work was funded by both NGOs and the GOE, and was undertaken in several cases through PSNP public works programmes. Increasing accessibility to water had significant impacts on children's time use, particularly that of girls, given the clear sexual division of labour around water collection, which normatively defines this as the work of girls and women. A 12-year-old boy in Addu said that the construction of a deep well by the government had reduced the travelling distance of his mother and sisters by half (Afar, HHCS interview with child aged 7–12). In Haro Kersa, a pond for livestock water supply was constructed by an NGO, but dried up during drought conditions – meaning that children responsible for looking after animals again needed to go further afield to find water. In Haro Kersa, this not only had consequences such as exhaustion and school non-attendance, but put them at risk of running into neighbouring communities with whom their community was in conflict. Lack of clean water supply also had implications for children's sanitation, hygiene, and health– as discussed in the section on Research Question 2.

Whether or not a community had access to a water source was an important distinction: adult men, adult women and teenage boys and younger children in Haro Kersa all called for an improved water supply as the key intervention that would improve their lives. Irrigation was specifically mentioned in several communities – men in Yayike said that provision of irrigation from Lake Abaya is a key intervention that they desired, observing that their '*brothers near to the lake are changing their life using the lake now*' (SNNPR, Yayike, FGD with adult males).

For those that did have potable water sources, a further question was the extent to which that source was reliable in the event of drought – with many water points and wells having dried up. Most hand-dug wells dried up in Addu, but the government constructed one deep well fitted with a hand pump that (to date) had provided an uninterrupted water supply. In Gurwure, even deep wells constructed prior to the drought stopped providing water, so the government excavated them further and constructed two additional wells elsewhere in line with the water table. Even in Ofla, where irrigation is relatively common, it was observed that the drought in 2015 deprived the irrigation systems of water and hence left large areas of irrigable lands uncultivated. The effective mapping, sourcing, and management of groundwater in Ethiopia was recognised by one respondent as one of the most important initiatives that should be undertaken to build resilience to droughts.

Specific interventions were carried out in pastoralist areas. The *woreda* administration in Dulecha described how the GOE's pastoralist resettlement programme had begun in one *kebele* in 2016 and was expected to expand to four additional *kebele*s in the current year. This involved developing infrastructure for communities and providing them with agricultural land and inputs. The Pastoralist Community Development Programme (PCDP) is one of the biggest development programmes operating in Afar – in Dulecha it has financed various infrastructural developments over the past three years, including water pipelines, school expansions, and health posts. It also provides technical and material support for extension services, and organises and finances cooperatives. A matching fund also aims to incentivise *woreda* governments to invest in projects. PCDP staff in Dulecha indicated that interventions did not change significantly under the drought, though discussions took place about the possibility of developing range

lands for animal fodder in such circumstances. In Megale, the same idea had been floated by the regional government, but it appears not to have taken hold in local government and was not taken forward.

5.3.5 Livelihood interventions

A small number of interventions to facilitate livestock destocking were mentioned by respondents. In Afar, it was reported that an NGO had created trade associations in six *kebeles*, and trained them to buy and slaughter small animals, and to distribute the meat locally to the most affected households. The NGO paid the association for the meat. This intervention sought to create demand for local animals, and had the additional benefit of feeding vulnerable households. While destocking, as described in the response to Research Question 2, is generally considered to be an undesirable and negative coping strategy, among pastoralists in particular, but also among ago-pastoralists, if it is unavoidable then improving value chain access, and more broadly controlling the conditions of slaughter and distribution, will help to reduce the negative impacts of herd depletion.

In several communities, NGOs had provided households with livestock as a means of building up their asset value. Such activities were undertaken more commonly outside of drought periods, given that during droughts funding tended to switch to emergency response inputs. Two communities mentioned that they had been encouraged to buy, or provided with, so-called 'improved' cattle that would generate more milk and/or meat – but in both cases, the cattle could not adapt to the harsh conditions and were sold. Men in Haro Kersa said that the Borana cattle they were told to buy were too demanding in terms of food required, and hence unsustainable within their household budgets – and so were sold (Oromia, Haro Kersa *kebele*, FGD with adult men) (see discussion around restocking interventions in the section on Research Question 4).

There were few reports from communities that seeds had been provided to them as part of the response. They had received seeds in the past – though the community in Faji Gole commented that those seeds had failed to withstand the erratic rains they have experienced over several years. According to respondents in Sivilkay, women-headed households were left out of the provision of seeds, fertilisers, and forage – the reason provided was that women may have failed to request such support and generally had smaller farm plots than men (Amhara, Sivilkay *kebele*, HHCS interview with adult woman). A separate review of the El Niño response finds that seed provision was a weak element of the response.[66]

5.3.6 Child protection and other interventions.

At community level, interventions that specifically sought to deal with child protection and psychosocial support were rarely mentioned, but this is perhaps not surprising given that none of the research sites were target areas for child protection interventions.

However, one example of a direct intervention was a UNICEF-funded NGO project in Oromia and SNNPR which sought to create awareness within communities about child well-being through training mentors, providing psychosocial support, and supporting community-based child protection. Project implementers observed that communities perceived the value of such activities as being far less than those that are more obviously 'life-saving', such as food, water, and health. However, this is not to say that protection issues were not raised by respondents – a teenage girl in Tirtira said that if she were powerful in her community she would introduce mechanisms to avoid forced marriage of girls, so allowing girls to choose their husbands and finish their education before they get married. In Faji Gole *kebele*, children mentioned that lack of resources caused conflict between their parents, which was one driver in their decision to migrate to urban areas. In turn, a range of child protection issues were raised in relation to children who had migrated (see section on Research Question 2). The cluster tracking data show that migration was a main reason for the separation of children from families, and while interventions were underway to reunify families, child protection issues surrounding migration were clearly an area where resources and interventions fell far short of meeting overall need or what would have been sufficient to curtail the phenomenon.

In several *woreda*s NGOs provided clothes and school materials as part of either ongoing programming or emergency response. In Burkoch, for instance, NGOs reportedly provided clothing for students from extremely poor households, as well as pens and exercise books for distribution to students (Amhara, Burkoch, FGD with adult men). Children in Burkoch said that a lack of education equipment had an impact on their ability to go to school – they had begun to write six subjects in one exercise book (Ebenat, Burkoch, FGD with children). Teenage girls in Sivilkay and Faji Gole also suggested that the provision of educational materials, along with food aid, was an important intervention by government (Amhara, Sivilkay, FGD with older girls; Oromia, Faji Gole, HHCS interview with child aged 13–18).

Cash transfers were mentioned in some communities, often in relation to the PSNP, but in some cases cash

[66] USAID, 2016a

transfers from NGOs were referred to. In Afar, an INGO gave money to households with children or pregnant and lactating women with acute malnutrition. The original intention was to distribute livestock to those households, but a decision was made to switch to cash given the delays in procuring livestock and a concern that drought would kill the animals. There were varying opinions on the relative value of cash support, as opposed to in-kind support. Men in Faji Gole and Haro Kersa said that they much preferred in-kind support – in Faji Gole, the reason was that food prices are increasing so that cash delivered poor value (Fentale, Haro Kersa, FGD with adult men; Shashemene Zuria, Faji Gole, FGD with adult men). However, children in Yayike said that cash support was the best intervention to support their families (SNNPR, Yayike, FGD with children).

5.3.7 Development activities

There were significant differences in the extent of development interventions received by communities in the period before and during the drought. Ofla and Ebenat demonstrated some of the highest levels of development investment and activity, on the part of donors and the GOE. A representative of the *woreda* government in Ebenat explained that: '*it is after the drought that many grand projects have been implemented in the* kebeles*…[it] brought a wake-up call for development interventionists and farmers themselves to devise strategies that would enhance drought resilience.*' However, this was an exception rather than a rule as no such change, and far more limited investment, appeared to have materialised in other communities (such as Haro Kersa).

Development interventions in the communities were typically oriented around infrastructure and technical outreach (e.g. education and health facilities and farmer training centres), asset building, livelihoods interventions such as the provision of improved seeds or livestock, strengthening value chain access by improving roads connecting villages to market towns, and improving water sources (e.g. pipes or wells).

Some donor-financed programmes explicitly seek to build resilience among poor rural communities. The USAID-funded 'Graduating out of Social Assistance and into Long-Term Food Security" (GRAD) programme, for example, intends to incrementally increase households' participation in diverse economic activities by linking them with market systems and building income and asset bases. Furthermore, efforts to build financial management capacity and financial services opportunities were mentioned in several *woredas*. Loans associations, revolving funds, and cooperatives for women had been established in Megale, Gurwure, and Adishum Bereket with support from NGOs. In Ofla, an NGO had supported establishment of a Women's Savings and Credit Association (10 years prior to the study, in 2007) and a revolving fund providing women with initial assets (sheep or goats) and training on trade and livestock management. Whilst ostensibly a development strategy, the association (which was managed entirely by the women of the community) was able to adjust its access criteria, and to support households in the context of the drought (see Box 20 below).

Box 20 Women's Savings and Credit Association: support during the drought

The association had a total of 957 members (all women) and nearly ETB 2.5 million reportedly in capital – and by 2015 had gained ETB 72,000 as profit from share payments. Normally loans of between ETB 600 and ETB 50,000 are made to members, based on members' levels of saving (which is considered as a form of collateral), with 12% interest. During the drought, the association reduced the interest rate on loans to 6% in order to mitigate issues faced by households making repayments. They also relaxed the membership requirements, with poor women and female household heads able to obtain credit totalling ETB 134,000 (provided as an injection by the founding INGO). This supported households during the drought to meet their household needs: '*So we were providing loan services for applicants as much as possible to help mitigate the impact of the drought. Most of the loans were taken for consumption and some of them were for funding student fees for children and even in universities.*' (Tigray, Ofla, KII with Women's Association Representative).

Furthermore, the repayment period was elongated, and since 2017 (after the drought) the association reports that members have been repaying their loans – some members nominating to use their savings to offset interest charges. In addition, an additional 150 households were provided with sheep/goats for reproduction. Selection was based on need, rather than membership, during the drought: '*The support in 2008 E.C. [2015 G.C.] was meant for the poor – not necessarily members of the association.*'

However, some accounts indicated that despite receipt of support through this mechanism, challenges were still experienced. The wife of one household (where both husband and wife had disabilities) became a member of the savings association in 2015 (the drought year) and received livestock, as well as a loan of ETB 2,000 in 2016. The extent to which this enabled the household to recover was limited: since the loan was used

for consumption, and one of the sheep died, three gave birth – of which all were sold in 2016 to pay back the amount of the loan that they had received.

In Burkoch, a respondent explained that PSNP transfers were made through ACSI, which made recipients think more about savings and financial services than they might have done otherwise (Amhara, Burkoch, KII with school principal). In Megale, the PCDP had assisted with the establishment of eight savings and credit cooperatives in 2015 and 2016, providing technical and financial aid. In Shashemene Zuria an NGO had tried to create a savings group among the youth, with a view to them establishing micro-enterprises. However, according to a teenage boy interviewed, most failed to stick to the savings plan (Oromia, Faji Gole, FGD with older boys). In Sivilkay, the *woreda* government had also tried to stimulate youth employment by providing loans to youth groups and cooperatives, as well as access to working premises for free (Amhara, Sivilkay).

Development partner and NGO representatives recognise the important role that migration – as well as the skills and income sources to which it can contribute – can play in sustaining households and communities. One INGO respondent explained that at least one household member should earn income from jobs other than farming, so that the family can fall back on their income in times of shock. While their salary might not sustain the whole family it will at least provide some degree of safety net and '*stagger the shock*'.

5.4 Research Question 4: Long-term impacts on children's well-being

What are the potential long-term impacts of the 2015–16 El Niño event upon the most vulnerable households and their children's well-being in the affected regions?

Measuring long-term drought impacts, and accurately attributing them to the 2015–16 El Niño drought, is problematic. A number of factors militate against this. Firstly, our study design is not longitudinal, consisting of only one synchronic data collection point. While carrying out robust research on change over time in the past is challenging and demanding, that change is nonetheless reasonably accessible to a single point data collection via recall questioning and temporal 'anchor points' which help people reconstruct sequences of events. The same cannot be said of projection into the future. For obvious reasons, it is not possible to measure change which has not yet occurred: this lies in the realm of forecasting, not measurement. Under certain circumstances, it is possible to frame questioning in terms of hypothetical scenarios, but this is not always a reliable approach, depending as it does on highly contextual understandings of time and events which have not actually happened. Secondly, even if we had the luxury of a longitudinal design, we have no baseline data – except, to some degree, Wave 2 (2013–2014) of the ESS dataset. While we have done as much as possible with those data, the caveat remains that the survey employed a broad socioeconomic tool that was not specifically designed to capture data on children's well-being, so there were intrinsic limitations.

One key positive organic feature of the research design and context is the fact that the El Niño drought occurred two years before data were collected for this study. While this is not a long time when taken in proportion to a human lifespan in rural Ethiopia, or to a generational cycle, it is not completely insignificant either, and does offer us a window onto trends and patterns of change, adaptation, resilience, and other drought-related effects which might be expected to either continue into the future or to have long-term effects on children's well-being based on research carried out in other contexts: in other words, impending threats. In this section, we will present and discuss findings from the FGDs, HHCSs, and KIIs which speak to the issue of future threats (considered in the context of resilience) which are related to people's experience of the El Niño drought. Where appropriate and feasible, we will also draw in relevant material from other studies—particularly sectoral research in livelihoods, nutrition, health, and education—which may help us to understand what threats lie ahead and what kinds of policy and programming are needed to mitigate them.

5.4.1 Food, water, and livelihoods

The first direct impacts of the El Niño drought were felt in the areas of food and water shortage: access to food and food security were experienced because of crop and pasture failure, which depleted assets (livestock) in pastoralist and agro-pastoralist *kebeles*, crops for consumption and sale in agriculturalist and mixed-livelihoods *kebeles*, and access to water for drinking, cooking, and domestic washing across all *kebeles*. Real household purchasing power fell in the context of decreased earning capacity and rising market prices. The GOE and civil society emergency response, while effective in ameliorating many of the most critical and acute food and water security impacts, did not generally provide affected populations with effective opportunities to make livelihoods investments. Given this context, what do longer-term prospects for food and water security look like? How successful have families been at (a) recovering to pre-El Niño levels of production, consumption, and assets, and (b) at building

resilience against the likelihood of future droughts or other climate shocks?

Box 21 Livelihoods and resilience

> Livelihoods do not exclusively constitute resilience, but – certainly in the Ethiopian context – they play an important role in determining what resilience means for a given community or household; what impact drought is likely to have upon resilience; and what interventions could help to build resilience. In the context of considering livelihoods, the many dimensions of resilience are revealed, including its many scales and drivers through time and geographical space. Pastoralism, for instance, in some ways displays important characteristics of resilience: by migrating, pastoralist communities adapt to shifting weather patterns and resource availability. Herds may collapse in bad years, but then can be rebuilt during a few good years, and in the meantime households practice various coping strategies, underlain by complex customary institutions. However, this inherent adaptability is coming under significant strain with the severity and frequency of climate shocks in recent years (as presented in Section 4). Climate is not the only factor that is posing a fundamental challenge to the viability of livelihoods. Other social, economic, and political processes interact with climate trends to determine resilience outcomes.

Livelihood recovery, and, ultimately, resilience, is related to a range of highly inter-related factors (see Box 21 above and discussed further below), including but not limited to: climatic context, available infrastructure and services, livelihoods type, assets and asset loss, household vulnerability, decision-making, and social capital. In Afar's Addu *kebele*, adult men spoke to the first and second points on this list, noting that although El Niño itself had run its course, they continued to suffer water insecurity because of the combination of damage to wells and recurring drought problems: '*The recurrent drought is also affecting our traditionally constructed wells because of low groundwater recharges as a result of the drought. Many hand-dug wells which were the main sources of water for our livestock are dried. As a result of the drought our travelling distances to get water for our livestock are doubled.*' (Afar, Addu *kebele*, FGD with adult men). In the other Afar study *kebele*, by contrast, respondents spoke of the transformative impacts of a major water security initiative undertaken by the Afar Region Water Bureau, which in 2012 constructed a deep well, with a diesel pump and reservoirs, as well as distribution fountains. Informants cited vastly reduced travel times to access water, as well as a reduction in water-borne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diseases. The installation of the water supply has, however, caused significant in-migration to the *kebele*, which may be a cause for concern in the future. (See also discussion in the section on Research Question 3).

Box 22 Herds and wealth

> '*In the earlier days wealth was defined by number of camels and cattle one possesses. However, with the frequency of drought increasing, the availability of animal fodder is decreasing and keeping large numbers of bigger livestock such as cattle is increasingly becoming a challenge. Moreover, the drought of 2015–20116 killed a significant number of cattle. Due to the frequency of drought and shortage of animal fodder, people are gradually switching preferences from larger animals such as cattle to smaller ones such as goats. Hence, goats are now regarded as important assets and are counted to define wealth.*' (Afar, Tirtira *kebele*, KII with community leader).

In the pastoralist study *kebeles* in Afar and Oromia, and indeed in the agro-pastoralist communities studied in Amhara, Tigray, Oromia, and SNNPR, study participants widely reported herd depletion, through death and forced sales. Switching from larger animals, such as cattle and camels, to less care-intensive goats was also a common strategy. In a FGD with older girls in Afar's Tirtira *kebele*, respondents reminded us that herd depletion or livestock type change represents a traumatic asset loss, particularly in communities where identity and self-worth are bound up with herd size: '*In our community we mostly feel worried about drought and death of livestock. In our age we know that our families had many cows and the milk supply was quite enough. Nevertheless, in recent years because of the successive drought we lost the majority of our cows and now depend on goats as main milk sources.*' (Afar, Tirtira *kebele*, FGD with older girls). A young girl in Oromia's Haro Kersa, who was responsible for looking after her family's sheep and goat herds, expressed her worry about the welfare of the animals and her sadness at their high death rates in recent years. In a very real sense, the assets that these communities have (their livestock) were turning into liabilities. As the household head in Addu explained: '*We don't have the tradition to save in the form of money but to save in the form of livestock.*' (Afar, Megale, Addu, HHCS interview with adults).

In terms of children's well-being, herd depletion, whether in predominantly pastoralist or in mixed agro-pastoralist *kebeles*, has immediate, acute effects on consumption, which manifest themselves as negative dietary change (described in the section on Research Question 1)—the more so in pastoralist *kebeles* where milk is an important part of the traditional diet. Longer-term effects are particularly related to the centrality of livestock as an asset: again, while this is true of both agro-pastoralist and pastoralist communities, it takes on greater importance in pastoralist communities, where livestock, and not agricultural land, constitutes the central asset base. It is also important to note the role of livestock in culture and social reproduction, especially in pastoralist communities, where identity is closely tied to livestock ownership. Inheritance, patrimony, status, and ritual exchange, in the form of bridewealth and dowry, are all potentially negatively affected by herd depletion or switching to less prestigious smaller animals; in turn, degradation or destabilisation of the socio-cultural world in which children live is likely to have negative impacts on their affective well-being.

It is also important to consider herd recovery time. In both pastoralist and agro-pastoralist *kebele* types, study participants emphasised that their herds had not recovered to pre-El Niño levels, in terms of animal type (the switch to goats was also encouraged by government restocking programmes in Afar) or in terms of numbers. While we would offer the caveat that livestock loss may have at times been strategically overstated by pastoralist respondents, there is enough triangulation in the data to demonstrate that significant losses did occur. A study conducted in Sitti and West Haraghe Zone of the recent El Niño event considered the loss of productive assets and what this meant for households' economic status[69]. The study identified that the average loss was 77% of herds, although this was much lower amongst households with smaller herds – with the poorest reporting 60% losses, and the wealthiest reporting 85% losses. The better-off households who were found to have sold more than in normal years, experienced significant capital losses, on account of the reduced market values. The report indicates that – even taking conservative, 'best case' scenarios of herd reductions – the average loss to a household was $4,200. Typically, restocking following the loss of half of a household's cattle takes four years – in the absence of other, adverse conditions.[70]

Whilst restocking is part of the pastoralist cycle of accumulation, collapse, and rebuilding, the severity and recurrence of the drought shocks experienced – along with environmental degradation, resource and population pressures, as well as conflict/raiding and political pressures – are eroding the traditional mechanisms of livestock recovery[71]. There is evidence

[69] Valid Evaluations, 2017.
[70] United Nations Food and Agriculture Organization (FAO), 2017.

of the need for minimum herd sizes to ensure sustenance, enable herd growth, and recover from shocks – but when losses are so large, the viability of restocking is questionable. Indeed, there is a longer-term threat that households will fall into (or get caught in) a trap of poverty, when sustaining such significant losses in their productive assets with limited ability to recover.

Studies adopting a critical livestock threshold (CLT) model consider that those households which have experienced shocks but have retained assets equal to or above the threshold will be able to recover and grow/escape poverty, whilst those whose assets are below the CLT will be trapped[72]. A study from Borena – southern Ethiopia – identified a herd threshold of 10 livestock units, below which '*a household is economically not viable and thus enters a downward spiral of poverty*'[73]. In Afar, 30–40 ruminants was considered the 'minimum' to establish a pastoralist way of life, whilst a proportion determined by the household of between 50–70 sheep and goats was suggested to be the threshold for restocking in Somali[74]. From a study from Kenya (Garissa), conducted over a 12-month period in 2013/14, it was evidenced that, after a drought shock, increasing livestock numbers was reliant on waves of pregnancies but that '*busts*' (significant losses) were '*likely to be longer-lived due to prevailing climate variability*'. Cattle had the highest multiplication rate amongst pastoralist herds, followed by goats, sheep, and camels (in order). However, overall decreases in herd sizes indicated that if trends were to continue into the future – and not be interrupted by upward 'booms' in livestock cycles – the declines could tip herders to a point from which they were unable to return.[75]

The higher losses experienced amongst the wealthier households runs counter to thinking that the better-off are able to keep their animals alive[76], but is consistent with trends from previous significant droughts studied in Ethiopia and with reports from this research. A study undertaken in Amhara, following the drought in the late 1990s, sought to determine the longer-term impact of environmental shocks on households[77]. In terms of livestock recovery, there was a strong differentiated pattern, '*households that exited the drought with few livestock were strongly disadvantaged in their rate of recovery periods*'. Furthermore, rates of recovery of livestock assets were found to be slower where shocks were higher, and faster in an environment where there was better access to community social capital. It is worth noting here that our primary data generally show a weakening in community social capital and solidarity in non-pastoralist *kebeles* (detailed below).

Similar to the patterns reported in this research (as discussed in the section on Research Question 2), the top wealth quartiles were evidenced to have experienced considerable asset dips, and exhibited greater asset sensitivity to shocks. Whilst the lowest quartile had relatively lower decreases, they demonstrated low resilience and inability to rebuild their assets (livestock) once they had been diminished beyond a certain point. The study points to important possible considerations for the longer-term recovery of households following the El Niño episode, especially in a context where customary institutions have been affected by the degree to which the drought hit and wider pressures/changing dynamics, with the better-off losing more but being better equipped to rebuild (fairly robustly) post-shock. Significantly, whilst gender of household head was found to be irrelevant in subsequent restocking, the importance of social capital and community membership organisations – as well as labour market access – was significant in increasing growth rates. Food aid to households was not shown to protect households' future assets – but actually had the opposite effect. However, within the wider context, there are longer-term questions around the viability of pastoralist livelihoods and whether households sustain themselves and recover. For example, there is evidence from the Somali region, where there has been a sequence of low rainfall since 1999/2000 so frequent that it is considered to be a long-term decline in rainfall, that it is thought to be indicative of '*the end of pastoralism in the Greater Horn of Africa*'. Indeed, the time between drought occurrences is insufficient to reconstitute herds[78]. However, others argue that although drought triggers a crisis, it is underlying vulnerability that is the real problem. The threat to being able to regenerate/reconstitute herds between drought episodes gives rise to two divergent ways forward: settlement/sedenterisation or regularisation of informal cross-border trade. Both threaten pastoralists'

[71] Kassahum, A., Snyman, H. A., Smit, G. N., 2008; World Bank Independent Evaluation Group, 2016

[72] The threshold values are determined based on the number of animals required to support a person or family, if the asset (i.e. the animals) provide that person or family with all of their needs. Many experts contend that the CLT – or concepts of thresholds for viability/recovery – take pastoralist systems as being 'closed' or 'isolated', when in reality they are not.

[73] Mohammed, A. A., no date.

[74] Cited in Mohammed, A. A., no date.

[75] Mwanbi Mwanyumba, P., 2014.

[76] FAO, no date.

[77] Carter, M. R., Little, P. D., Mogues, T., and Negatu, W, 2004. The study drew on seven rounds of household survey data conducted over a three-and-a-half-year period in eight kebeles, alongside recall questioning to determine household asset holdings between 1996 and 1999. Based on overall estimates, crop losses between 1998 and 2000 totalled $60,870 and livestock losses totalled $58,524 amongst sampled households. This translated to $266 per household, which – at the time – was higher than the annual average cash income for over 75% of the households.

[78] Although others argue that pastoralist livelihoods are still resilient, it is just that they are operating in an increasingly difficult policy environment (restrictive borders and restricted imports) in which it is impossible to draw on their adaptive capacities.

flexible livelihood base – with implications also for the social institutions that underpin pastoralist societies. Evidence from this research also suggests that households are increasingly participating in income generation, such as participation in charcoal selling and basketry reported in Afar, Dulecha, by the household head, as well as some small shifts to agro-pastoralist ways of life in Dulecha, where men reported owning land that they rented out for agriculture.

Box 23 Spiralling livelihood decline

> '*The main income for the family was generated entirely from the farmland using the family labour. Unless lack of rain affected their harvest they were living on the produce of the farmland. Maize and* teff *are the main crops sown in the farm, where the* teff *is mainly used to be sold to generate money that can be used to buy different items from the market. According to the lady [female head of household], the family entirely lost their means of income, both land and cattle, due to the drought. All the cattle perished one by one due to lack of drinking water and animal feed. Without their cattle and the required labour to attend the farmland, the land could not be beneficial. As many farmers lost their cattle and have no interest in cultivating others' farms, her family couldn't get anyone that can take their land for a minimal rent. So, the family lost everything they depend on for their living during the 2015/16 drought.* (Amhara, Sivilkay *kebele*, HHCS, interview with household head, excerpt from notes).

Across our study *kebeles*, those with agriculture-based livelihoods (all except the Afar *kebeles* and Oromia's Haro Kersa *kebele*) seem to have largely recovered their pre-drought production levels, although some older adult male respondents from Amhara's Sivilkay *kebele* lamented that their production levels never attained the levels they enjoyed before the 1984 drought. It is also important for the discussion to be framed in the wider context of land degradation – and climate variability (as introduced in Section 4) – in Ethiopia. Indeed, for rehabilitation/recovery to happen, it assumes that there has been a significant change in the environment, or in the management of the environment, for efforts to be sustained. Given the increasing pressures in the context of rural Ethiopia, including environmental degradatio n and deterioration of natural resources, there is a risk that production may fall to a point below what is viable in terms of recovery. Reports of soil erosion and deforestation were shared in various communities (including reports in Gurwure, Tigray, that forest cover had considerably decreased in recent years). There are wider concerns that human pressure, changed grazing patterns, and unsustainable agricultural practices are contributing to longer-term losses in agricultural productivity (estimated at 3% of GDP), affecting a huge proportion of the population (20 million) and translating into less resilience to future, periodic droughts.

In Tigray's Adishum Bereket *kebele*, older boys expressed confidence about their agricultural livelihoods in the future: '*We don't have worries about not having food in the future because the rain-fed and irrigation products are sufficient for our families. The irrigation product (mainly the cash crop pepper) is the main source of income to get sufficient food in the future… We don't have much worry in our community. We don't worry about drought and food supply. Except last year we always get enough harvest and enough food supply. Our irrigation production is very helpful to generate sufficient product of grain and cash crop (pepper). We have also perennial fruits and we expect more income and food supply.*' (Tigray, Adishum Bereket *kebele*, FGD with older boys). It is important to note that irrigation, flagged here, is recognised as a critical dimension of any future resilience for agriculturalists. An encouraging finding which emerges from the data relates to new cultivars introduced in some *kebeles* to build drought resilience. These included two drought-resistant maize varieties in Oromia's Faji Gole *kebele*, as well as mung beans and a type of sorghum in Amhara's Burkoch, and other unspecified drought-resistant cultivars in SNNPR. That said, it was also said in an FGD with adult males in SNNPR's Maddo Mukanekka *kebele* that local farmers lacked the resources to make these kinds of changes: '*No attempts were made to change the varieties of their crop types as well as their livestock. They said that they want to diversify their livelihood means, but couldn't do so because of lack of capacity – the resources required for the purpose.*' (SNNPR, Maddo Mukanekka *kebele*, FGD with adult men).

It is critical to observe that while agriculture-based livelihoods have the potential to recover from drought faster than is the case for recovery of pastoralists' herd sizes, particularly when seeds, fertilisers, pesticides, and other agricultural inputs are provided as relief, agriculture is not independent from livestock holdings in areas where oxen are used to plough fields – which is to say, virtually all smallholder agricultural areas. Indeed – although data are limited – evidence from the droughts in Ethiopia in the early 1970s, and those of 1982–1984 suggests that oxen losses accounted for between 44% and 87% of cases of no cultivation in the subsequent year[82]. This lesson was driven home in

[82] FAO, no date (b).

the HHCS carried out in Amhara's Sivilkay *kebele*: the family lost all their oxen during the El Niño drought, and as a result were unable to farm the land they owned (see Box 23 above). This, combined with unrelated health shocks, created a spiral of increasing vulnerability and collapsing resilience.

Whilst reports indicate that production levels have recovered in many agricultural communities since 2015,[83] whether or not agricultural production returns to normal levels, drought-oriented consumption strategies sometimes continue, with potential longer-term impacts on children's well-being. In the HHCS carried out in Amhara's Burkoch *kebele*, family members reported in interviews that although their agricultural production had returned to normal, they had elected to continue many of the strategies which governed their consumption patterns during the 2015–2016 drought. An example of this is that although the family is again producing *teff* on their farm, they prefer to sell this and use some of the proceeds to purchase sorghum—which is perceived as a lower-quality and less desirable option to *teff*. They are saving the money to protect against future shocks, which they worry about. Moreover, *injera* made with sorghum is said to be less appetising, and heavier than *teff injera*, and so, ultimately, less is required to meet family needs. Portions consumed at meals also continue to be smaller than they were before the drought.

In Tigray's Gurwure *kebele*, participants in an FGD with adult women observed that haricot beans were used to make a type of bread called *Kita*, a practice reportedly introduced in response to the drought because of the reduction in crop production of staples (sorghum, maize, and *teff*). Interviews carried out in this *kebele*'s HHCS confirmed that the practice had continued. Though the household respondent did not make explicit the reason why they continued to use the practice, there were numerous reports to the effect that agricultural production had not returned to normal since the drought – with the Stalk Borer pest severely affecting sorghum/maize crops during this season (there were some reports of it affecting other crops as well, but this was only reported in the children's sessions). Similarly, in Oromia's Faji Gole, near to the urban centre of Shashemene Zuria, repeated harvest failures, combined with crop disease (despite diversification to *teff* and haricot beans, from maize alone), were leaving households unable to provide for themselves year after year. As a result, many adults and children were pursuing alternative income sources through waged labour or petty trade.

5.4.2 Human capital

As demonstrated in the results presented in relation to Research Questions 1 and 2, the human capital dimensions of nutrition, health, and education were in the primary impact zone when El Niño struck. They are also central pillars of the well-being framework as applied to children. We have documented the short-term human capital impacts, both direct (crop failure and livestock death or herd reduction, leading to negative food security outcomes in both energetic and nutrient terms, which in turn led to spikes in acute moderate to severe malnutrition; water shortages leading to inadequate water for drinking, cooking, and washing, leading in turn to WASH-related skin and gastrointestinal health conditions) and indirect, deriving from the application of coping strategies: school drop-outs and irregular attendance both increased in all study *kebeles* as more children of a wider age range became involved in work outside the home, or were needed to help drive livestock far from home in search of water and better pastures. School attendance, and ultimately performance, were also affected by other factors, such as hunger (although school feeding programmes, even when inconsistently implemented, went some way to ameliorating this), shortage of clothing as a result of consumption cuts and lack of water to wash existing clothes, and lack of school materials (also a victim of household consumption cuts).

All of these human capital dimensions, in addition to being in the front-line of short-term El Niño impacts, are also potential impact zones of longer-term threats. Shock-related acute undernutrition was ultimately somewhat controlled by emergency feeding, IMAM protocols, and the end of the drought, but in the longer term it is important to consider the relationship between ongoing poverty and chronic malnutrition and stunting, as well as the possibility of future climate shocks resulting in repeated episodes of acute undernutrition. As Table 3 and Table 4 below show, the trend in terms of children under five experiencing moderate malnutrition is increasing in Afar, and in Tigray, whilst it has reduced significantly since the immediate drought year, it has not fully returned to 'pre-drought' levels. For pregnant and lactating mothers, levels of moderate malnutrition have increased since the drought – although in both cases this should be understood within the context of MUAC 'cut-off' points having been increased from 21 cm to 23 cm.

[83] Reporting in FEWSNET and the 2017 post-harvest assessments.

Table 3 Trend in acute malnutrition among children under five and pregnant and lactating women in Addu kebele, Afar

	Year	Moderate	Severe
Children under five	2016/17	250	25
	2015/16	200	8
	2014/15	190	25
Pregnant and lactating mothers	2016/17	350	
	2015/16	230*	
	2014/15	200	

Note: The data were not drawn from reports on malnutrition from the health post, since these were unavailable. Information was obtained during an interview with the Health Extension Worker.

Table 4 Trend in acute malnutrition among children under five and pregnant and lactating women in Adishum Bereket kebele, Tigray

	Year	Moderate	Severe
Children under five	2016/17	26	0
	2015/16	156	3
	2014/15	23	2
Pregnant and lactating mothers	2016/17	68	
	2015/16	57	
	2014/15	25	

In Tigray's other study *kebele*, Gurwure, the Health Extension Worker explained that the same pattern was visible there: '*There is a difference in the levels of health and nutrition since the drought. The worst cases were observed during the drought – but there is evidence that it hasn't completely returned to how it was before. It's still higher now in terms of the number of cases of malnutrition that are being treated.*' (Tigray, Gurwure *kebele*, KII with Health Extension Worker).

Health is also an area of vulnerability: in particular, we need to assess threats to longer-term health outcomes, taking into account chronically high parasite loads (which may also impede micronutrient absorption), as well as constraints on optimal WASH practices leading to optimal breeding conditions for pathogenic vectors. It is worth noting that the Health Extension Worker in Gurwure *kebele* believed that '*Health cases, though, are considered temporary because they were treated and couldn't see/realise long-term health problems on children. I didn't see such kind of problems – I didn't see such kind of long-term things.*' (Tigray, Gurwure *kebele*, KII with Health Extension Worker).

Finally, education is an area of significant vulnerability: drop-outs who fail to return to school, as well as irregular attendance and attendance under suboptimal conditions, lead to long-term negative outcomes in this area. In general, across the *kebeles*, there were serious problems with children—typically older children—who dropped out of school during the drought not returning even after the crisis had passed. In some cases they felt they were too old, or they had become involved in work, or they had migrated away. Older girls also tended not to return once they dropped out to get married, especially in Afar. A lone positive note was sounded in Tigray, where the school director in Gurwure *kebele* observed that drop-outs were reducing every year: he described a '*contract*' between the student, the parents, and the school, which governed attendance, and seemed to be effective[84]. The school director also noted that in 2015–16, 17 students dropped out, but all of them returned to school the next year. We should note that nothing like this was reported in any other *kebele*.

[84] The contract referred to is a tri-partite agreement made between the school, the student, and the parents/guardians, that the student would not drop out from their education. Although reporting this as effective, the director did also note that it may also explain why children go further away from the kebele for economic opportunities – so that it is not possible for them to be found/reprimanded for 'breaking the contract'. This was not reported by others as being a reason for migrating from the kebele.

We now review a selection of the sectoral literature on longer-term threats to human capital outcomes. This review is included here because, as we noted at the beginning of this section, our single data-point study design militates against robust longitudinal conclusions about future impacts. For that reason, we have chosen to conceive of these issues as future 'threats', and also to review a body of literature that is based on longitudinal research, which addresses many of the same issues.

Exposure to malnutrition and disease for children is '*seldom without some form of permanent adverse effect*'.[85] It is well-evidenced that malnourishment experienced during childhood has lasting impacts into adolescence and adulthood, including in terms of health outcomes and educational outcomes, as well as in terms of productivity. There is also evidence of long-term psychiatric health issues, as well as trans-generational metabolic diseases[86]. Studies undertaken on the impact of transitory shocks (notably the effects of reduced consumption as well as utility losses) indicate that longer-term impacts include delayed entry into school, lower performance in cognitive achievement results, and lower levels of educational attainment (in terms of school years completed). This is found to be especially severe when drought is experienced at a particularly significant stage of development. Children born in drought years have a higher likelihood of being undernourished into the future, with children in Tanzania recorded as having low weight for height measures over a 10-year period following exposure to weather shocks[87]. In a study from Zimbabwe, children who were aged between 12 and 24 months at the time of experiencing drought grew 1.5–2 cm less than those who were a) not affected by the drought, and b) older at the time of the drought. This is consistent with literature that shows that nutritional setbacks are significant between weaning and two years of age.[88] Additional studies evidence that temporary hunger during the 1982–84 drought in Zimbabwe amongst children aged 12–24 months had long-term affects into adolescence: their growth was significantly less than that of other children (by 2.3 centimetres). These children's enrolment had already been delayed (averaging 3.7 months) and, 13–16 years following the drought, their grade completion was reduced in comparison to others (by 0.4 grades).[90]

There is evidence that exposure to shocks (including drought) negatively affects children's cognitive ability. Using the Peabody Picture Vocabulary Test (PPVT), a longitudinal panel study in Ethiopia, conducted over two rounds and with children aged four to six years old, found exposure to drought reduced the PPVT scored by 0.18 points[91]. Indeed, not only is children's education likely to have been interrupted during the drought itself (with absenteeism), but this is indicative that (possibly a combination of) factors, such as reduced ability to concentrate/learn, as well as poor quality education, have longer-lasting impacts.

Evidence from a 2010 study by Dercon and Porter on the height and socioeconomic attainment of children in Ethiopia who experienced the 1984 famine either *in utero* or as infants indicate that the potential impacts on human and social capital are far-reaching. Children aged under 36 months at the time of the famine had a higher likelihood of having experienced recent illness, or not having completed primary school, than an older cohort[92]. Estimates drawn from a study on children who had experienced drought and civil war in rural Zimbabwe suggested that loss of stature, schooling, and potential work experience as a result of shocks translated into a loss of lifetime earnings of 7–12% (at the lower end of true losses).

The extent to which the household suffered from crop damage was found to be significant in a study of health and nutritional outcomes for children aged 6–24 months in Ethiopia following the 1995/96 drought. Each increase by 10% of crop damage resulted in a 0.12 cm reduction in child growth over a subsequent six-month period[93]. Here, food aid was found to be significant in mitigating the adverse effects of food shocks on children within this age group. However, the Dercon and Porter study found that relief aid had made little difference in the longer term on children's health and productivity outcomes. Similarly, results from a study on human capital and climatic shocks found that that, except in the case of PPVT scores, participation in the PSNP programme did not contribute to 'better' child health and educational outcomes in the face of climatic shocks and in the longer term. Zamand determined that, in the case of children's human capital outcomes, household wealth had a more significant and positive impact in buffering the impact of the shock.[94]

[85] Ole-MoiYoi, O.K., 2013.
[86] Ibid.
[87] Alderman, H., Hoogeven, H., and Rossi, M., 2009.
[88] Hoddinott, J. and Kinsey, B., 2001.
[89] Alderman, H., Hoddinott, J., and Kinsey, B., 2006.
[90] Ibid.
[91] Zamand, M., 2014.
[92] Dercon, S., and Porter, C., 2010.
[93] Yamano, T. Alderman, H., and Christiaensen, L., 2005.
[94] Zamand, M., 2014.

There is some evidence emerging, however, that nutritional shocks may be partially reversed if nutritional deficiencies are corrected later in childhood – with suggestions that investments during the ages of six to eight years can have a large impact for cognitive achievement[95]. Other studies have suggested that adolescence provides another window in which to promote growth and support cognitive 'catch-up', beyond the first years of life. Young Lives survey data considered factors accounting for cognitive performance in later childhood/adolescence and found that nutrition was as important as other resources in continuing to promote growth and improve cognition. It found that it was possible for improved growth to take place beyond the first years of life, with interventions for pre- and primary-school children having value for longer-term developmental outcomes.[96]

This research indicated that children's engagement in work (both in and away from the home) often increased, in response to the drought shock. Evidence has shown that human capital accumulation as a result of child engagement in labour can be impacted, with wider implications for economic progress and social development in the long term. Children's engagement in work can be both positive (with children being proud that they are able to support their families) and negative (where it affects their development and educational attainment)97. Recent studies from India provide evidence that negative longer-term impacts of early child engagement in labour include mental health-related issues, such as emotional distress and low self-esteem, alongside other negative behaviours that were identified (alcohol use, risky sexual behaviours) – linked also to the profile of those households from which children were most likely to work, being amongst the poorest.98

However, evidence from Ethiopia has shown that increased pressure to engage in income-generating activities, or to take on family members' domestic responsibilities, has negative direct impacts (injury whilst working) and indirect (drop-out) impacts on children. Children from amongst the poorest households are more likely to experience injury, which are also exacerbated by delays in medical care – whilst, at the same time, girls are potentially exposed to abuse, especially in the context of domestic work in other people's households[99]. A study comparing the grade attainment of children aged between four and 14 years old in rural Ethiopia considered their earnings 15 years later[100]. The study, which showed gender differences, with boys typically engaged in cattle rearing and girls engaged in domestic work, highlighted that whilst work in childhood broadly affected grade attainment and adult earnings, there were thresholds at which work was '*detrimental*' both in the short- and the long-term. Childhood education was associated with higher earnings in adulthood – and children who had only worked, and had not studied, were found to earn consistently less in all economic activities than their peers. However, some interesting findings were presented – including that children who combined work and schooling (but not above the '*detrimental*' threshold), rather than exclusive schooling, earnt more and were more likely to be engaged in non-farm opportunities (potentially as a result of learning opportunities). Similar findings from studies in Nigeria highlight that – despite the immediate benefits of child labour – the long-term effects include under-accumulation of education, which limits future productivity and earning capacity.[101]

[95] Pollit, E., 1984.
[96] Cookston, B. T., Forster, R., McClellan, C., Georgiadis, A., and Heaton, T. B., 2014.
[97] Africa Child Policy Forum, Save the Children and Young Lives, 2014.
[98] Samonova, E., 2014.
[99] Ibid.
[100] Mussa, E. C., and Mirzabaev, A., 2017.
[101] Nwogwugwu, U.C.C., Ozoh, N., Nwokoye, E. S., and Ezenekwe, U. R., 2017.

5.4.3 Capabilities

In this section, we move from material and physical dimensions to explore the long-term threats to the 'capability' aspects of children's well-being – particularly the affective and aspirational dimensions. As is the case for much of the material presented under this research question, it is difficult to assess future timeframes. It is also more challenging to draw on secondary literature. While there is a substantial body of research on conditions such as post-traumatic stress disorder, it is not clear how relevant this would be, given that we consider not only stress but also a range of other emotions, and that this was only one part of a complex research protocol.

Table 5 Causes of sadness and happiness

Sadness	Happiness
Increased work responsibilities	Having enough food
Livestock death	Having time to play, not only work
Crop failure	Attending school
Long-distance transhumance	Have good clothes

Table 5 above is derived from a participatory research activity carried out in a FGD comprised of older boys, in Afar's Tirtira *kebele*. It is similar to the results obtained from this activity in other *kebeles*, revealing a set of quite universal affective triggers. It is worth noting that these results were remarkably similar across sex and age divisions. Other negative triggers include migration, lack of food, dropping out of school, forced marriage (in Afar), and a lack of play opportunities. Positive triggers mentioned in addition to those listed in the table above included returning home from migratory journeys with sufficient water, and the birth of livestock. We should note too that all of these triggers map directly onto short-term drought impacts, as described under Research Questions 1 and 2. They also relate closely to another emotion widely expressed across the *kebeles*—that of worry. Worry, or anxiety, or stress, about the possibility of droughts in the future is pervasive across the *kebeles*. And while the emotions listed in Table 5 may be transitory, worry and anxiety are ongoing (as demonstrated in the box at the beginning of this subsection), and were clearly expressed at the time of research, two years after the El Niño drought. Study participants across the *kebele*s in fact attributed a range of negative emotions to the drought: as mentioned, worry about the future, but also sadness and depression (this was especially emphasised by children when speaking about dropping out of school). Disempowerment and a general lack of agency were common, particularly when referring to hopes and plans for the future. Fear—which is of course akin to worry, but perhaps more acute—was used to describe concerns at the time of El Niño that family members who had travelled away to fetch water, or to seek better pasturelands, might not return; this is probably not classifiable as a long-term effect because it was directly related to coping strategies employed at the time of the drought. In Afar, several respondents mentioned their fears of conflicts with other clans. While this is a part of 'normal' Afar life, it became worse during the drought because of the occasional need to enter the territory of a different clan in search of water. In general, respondents spoke of

rising social tensions around the time of the drought, which is certainly commensurate with a sudden and acute resource shortage.

Box 24 Aspiration vs. marriage

> '*I want to continue and finish my education. After finishing my high school and university education, I want to be medical doctor. By being a doctor I want to help and treat the community living in our* kebele*. During the drought I dropped out from school and I was afraid that my aspiration was hampered. After the drought I continued my education and regained my aspiration. I fear for the drought to return back. I am afraid that my aspiration will be discontinued by the decision of my parents. I fear my parents will marry me and discontinue my education.*' (Afar, Addu kebele, HHCS interview with older girl).

The situation described in Box 24 above derives from the *absuma* system of early-betrothal cousin marriage, which is characteristic of Afar. The interviewee is pointing out that while she has the aspiration to finish school and university and then train to be a doctor, she recognises that there are many things working against her, including dropping out from school, but most importantly, her total disempowerment where marriage is concerned. In Sen's terms, she has almost no capabilities to achieve her own desired life trajectory. This is unfortunately something which is widely true of children and their aspirations across our study *kebeles*. There is also secondary evidence of the long-term implications on girls' lives of marriage – including, but not limited to, the very real threat that this poses in terms of closing educational opportunities and other life choices.[102]

Children aspire to many futures. The results of the application of a participatory tool in FGDs with children tell us that children want to become teachers, doctors, drivers, policemen, civil servants, engineers, and 'professionals', and to move away from their *kebeles* to urban areas. In general, aspirations reject existing livelihoods—to be involved in animal herding/pastoralism, or to live from agriculture in their *kebeles*. In the pastoralist *kebeles* of Afar and Oromia, however, some boys noted that they wanted to accumulate livestock and be cattle herders: in fact, this was one of the only clear distinctions between boys' and girls' aspirations, which tended to be very similar (younger children proposed similar lists of desired future professions, but shorter). '*Finishing school*' was also mentioned, though not frequently, as was '*getting married*'. It is likely that, drought notwithstanding, these life aspirations are generally going to be extremely difficult to achieve for the vast majority of children making up our study sample. In many ways, the El Niño drought only served to exacerbate pre-existing deficiencies in capabilities: education, access to opportunities, agency and empowerment, and social mobility. Older children are more conscious of this, and more realistic about the problems they face, with or without drought. In Tigray's Adishum Bereket *kebele*, a respondent from an FGD with older boys made this point (Box 25).

Box 25 Challenges to aspiration – 'beyond drought'

> '*Except in the last year drought is not our main challenge. Rather, our challenges that are affecting our aspiration are excessive workloads in rain-fed and irrigation agriculture, lack of high school in our* kebele*, and inaccessible road. To improve our lives we want, therefore, supports/interventions like the establishment of high school, construction/maintenance of the existing road and above all awareness creation training for our parents on child labour.*' (Tigray, Adishum Bereket *kebele*, FGD with older boys).

5.4.4 Social effects

Coping strategies applied to marriages (mainly reducing the number of marriages which took place during the El Niño drought) will predictably have some longer-term demographic effects, in addition to the shorter-term effects described in the responses to Research Question 2. These, however, are likely to be relatively small. Probably more significant at a community level are the fissures which emerged in local social networks during the drought—particularly because, according to many respondents, these produced wounds which have yet to heal. Field data suggest that this was much less of a problem in the pastoralist *kebeles*, where inherently high levels of social solidarity (described in the Research Question 2 section) seem to have resisted the potentially divisive impacts of the El Niño drought. Across the mixed-livelihoods *kebeles*, however, study participants told us about a range of effects of the drought on social capital and solidarity. In the section on Research Question 2, an argument was made to the effect that destabilisation of the social fabric could be detrimental to children's well-being. The same argument holds here, where we discuss a potentially long-term breakdown of social capital and solidarity. On the whole, these kinds of social tensions arose because of resource shortages.

[102] Emirie, G., 2005; Gerthnerová, E., and Haaij, H., 2015.

In Tigray, for example, social divisions were created by the fact that relief, in the form of animal feed and agricultural inputs, was not provided in sufficient quantities. Some households benefited, while others did not. According to a respondent in an FGD with adult men in Gurwure *kebele*, this situation remains unresolved: '*To some extent, yes, the drought has caused divisions within our community and its institutions. For example, the supplied concentrate livestock feed and major crops seeds from the government were not sufficient to all households and there was high competition among many households to receive the supports. During distribution of these supports there were tensions between our* kebele *leaders and untargeted households. This has created divisions within the community and still these are unsolved.*' (Tigray, Gurwure *kebele*, FGD with adult men). In SNNPR it was pointed out that the strong bonds of community which existed previously no longer obtained because the culture of support has deteriorated. In another example from Yayike *kebele* in SNNPR, traditional communal support systems were reported to have been degraded by a rising suspicion that the most vulnerable recipients of loans from better-off households would not be able to repay them. In Gurwure *kebele*, it was also pointed out that before the drought, there existed a tradition of sharing or lending labour and crops. While this continued to some degree during the drought, it was ultimately reduced by the scarcity of available resources. These examples illustrate the close relationship between solidarity, expectations of altruism and reciprocity, and material resources. It is also important to recognise that the drought, in addition to being a time of scarcity, was also a moment of tension, stress, and worry: this would have contributed to creating an enabling context for the deterioration or breakdown of social institutions. Finally, and in the context of the discussion presented in Section 5.2.4 we note that there are important policy lessons here: Carter *et al*. note that '*social networks and institutions play an important role in keeping households from falling into poverty, externally supported safety nets, as well as any form of development policy in general, need to be cognizant of the way in which such social networks operate so as to minimise any potential negative impact of programs on existing social institutions*.'

6 HHCSs: illustrative examples

In this section, we present a selection of five HHCSs (half of the total 10 which were carried out in the research). Many of the findings discussed so far have been engaged at the *kebele* level (or, in the case of policy, at *woreda*, regional, or national level). HHCCs offer a close-up perspective on how many of the issues discussed in the preceding sections on the research questions were actually lived by some of our case study households.

The close look at households, which reflect a diversity of livelihoods contexts, reinforces the fact that the livelihoods base influences how risk and vulnerability are managed. It also makes concrete many of the points which have been raised throughout the findings section of this report, particularly with regard to the ways in which the El Niño event's effects on children varied on the axes of gender and age: younger girls, for example, seemed to be generally less directly affected than older girls, and that boys of both age ranges. Younger boys took up paid jobs in some cases, and in others found themselves with new household tasks, such as cooking and cleaning, which would under normal circumstances have been the responsibility of mothers and sisters—during the drought, girls and women travelled much longer distances to collect water, often leaving younger children at home. It would be incorrect to claim that one gender was affected more than the other (although, as our case studies bear out, female-headed households are particularly vulnerable and lacking in resilience): in the case of both older and younger boys, migration and transhumance became more urgent priorities, and the distances travelled increased. For older girls, some aspects of workloads increased, especially in procuring water and in some cases working in nearby towns for money. Other aspects of girls' workloads were said to have decreased: the shortage of food meant that fewer meals were cooked, and cooking fuel requirements (traditionally fulfilled by girls) were lower.

The purpose in presenting the case studies is to highlight and instantiate these issues, and the socio-cultural dynamics mediating decisions, rather than to make generalised conclusions across the board. Summary profiles of the remaining five households are given in Annex C.

Box 26 Tigray – Ofla – Adishum Bereket HHCS

Household composition: The household in Adishum Bereket was headed by a man aged 60, living alongside his wife aged 45 and three of their children (a daughter aged 18, a son aged 12, and another daughter aged eight). Two of the couple's children had migrated to Addis Ababa during the 2015–16 drought and not returned. The household head had not attended school; the oldest girl was in Grade 10, the boy in Grade 6, and the youngest girl in Grade 3. The household comprised a wood and mud hut, with a corrugated iron roof and one bedroom. There was a dry latrine and a kitchen separate from the main room. The family used firewood for fuel and there was no electricity.

Livelihoods and income: The household owned 0.5 hectares of agricultural land for rain-fed crop production, as well as 10 x 10 m2 squared of irrigable land. Additionally, they owned one calf and one chicken. Before the drought, and during a good harvest, the family were able to harvest 300 kg of wheat, 250 kg of barley, and 20 bundles of straw. On their irrigated land, the household were able to grow peppers – and generate a cash income of around ETB 1,550 from these – as well as maize (200 kg) and nine bundles of stalk (animal fodder). During the drought, this was reduced drastically, with irrigated land not planted due to a shortage of water and rain-fed land producing only 100 kg of barley and three bundles of straw.

Prior to the drought, the household was considered fairly well off because they owned two oxen, two cows, and a calf, and also had access to rain-fed and irrigable land for production. They were able to produce sufficient food for their household's consumption, without external support. The loss of their livestock, however, had resulted in a long-term impact on the livelihood of the family – with 50% of their production from the rain-fed land being given for sharecropping, with some of the land cultivated in exchange for family labour on the land of other (better-off) households.

Expenditure and consumption: The household had regular expenditure on food, clothes, and additives for food (salt, oil, sugar), as well as land tax, church fees, and payments to Rural Savings and Credit Co-operatives. The household also covered rent for their older daughter, who was attending school in the nearby town of Korem (this was a significant monthly expense at ETB 120). In good times, the family could cover a lot of their expenditure by using grain produced on the family land for their

own consumption and cash from income made from irrigation products for clothing/other things.

The food supply was reduced during the drought, with a food gap experienced, causing the household to change their feeding habits. This involved eating three *injera* between seven household members, and changing from wheat and barley to sorghum (because market prices were cheaper).

Coping mechanisms: The coping strategies deployed by the household were undertaken in response to the consumption pressures they experienced, notably the food gap which – even despite livestock sales, and a loan – they struggled to fill. In order to generate income and alleviate household pressure three of the household members migrated. The husband migrated to Addis Ababa for six months during the drought, in order to generate income to support the family. He worked as a guard in a household and was able to return home with around ETB 3,000 and clothes for his family. He reported that during this time he risked his life in the city because he suffered from a sight problem. Two of the sons migrated to Addis Ababa in November 2015 and (at the time of the research) had not returned. The parents said that the eldest son went without consultation, taking his younger brother with him, to work in casual labour as a result of facing hunger at home.

> '*They are helping themselves, but they never send remittance to our family.*' (Mother).

In good times, the household was not engaged in daily labour, but during the drought they undertook different types of casual labour, which generated ETB 2,930 for the household. The eldest daughter took part in public works (undertaking construction activities on the diversion scheme and concrete canal) – working for two months to generate additional income for the household. During this time, she missed school for about two weeks.

> *'I was engaged in daily labour, with a daily rate of ETB 35…the job was fetching water and cement for those doing the construction activity. I am not happy with work, but I have not got any alternative and I have done it. I feel sorry for being poor because if my parents were not poor, I wouldn't have engaged in such type of work.' (Daughter, 18).*

During the drought, they sold their oxen for ETB 5,000 and ETB 3,000 each and their two cattle died, leaving only the calf. The normal price for the oxen sold at ETB 5,000 would have been ETB 10,000, but the pressure to gain money rapidly in order to cover food and the lack of sufficient cattle feed caused the household head to sell at a low price – this had affected the household, meaning they were unable to recover following the drought:

> *'We always regret it. I sold two oxen for cheaper prices and I now know I cannot get them back as the price is extremely increased. I sold the bull in this village and I have always chances to see the bull and I feel sad and regretted doing it. Sometimes I cry for selling the bull because I have a long attachment to it.' (Father).*

> *'Looking after cattle was my favourite work, but I stopped because our cattle are sold and dead during the drought period. I feel sad when I see my friends are with their cattle.' (Daughter, 8).*

The family used their savings in Rural Savings and Credit Co-operatives (which they put savings into each month, at ETB 44). They withdrew ETB 1,470 and stopped making deposits. However, they have since resumed saving and are trying to save the same amount each month.

External support received: They are not a recipient of PSNP support but they did receive emergency relief during the drought from November 2015 to September 2016. They received support for 10 months (November 2015–September 2016), at which point they were able to harvest their rain-fed farm and produce crops. They also received 30 kg of chickpea seed for plantation and their children who were at school benefited from the school feeding programme.

The household received a loan from the microfinance institute Dedebit Credit and Saving Institution SC (DECSI) (ETB 5,000) in 2015, which was increasing because of interest. They purchased a cow, but although they had paid part of the loan they still owed ETB 3,000. The family hoped to pay this back from irrigation products, if the pepper harvest was good. The price of cattle and oxen was said to be rising and it was not possible for the household to regain their lost assets. Irrigation provided a means for the household to produce cash crops, however, which was significant in terms of being able to consider recovery.

Impact on children: Competition for the limited food supply was very high. The family reported that they all experienced stress during the drought period because of the depletion of their assets, a shortage of food, and severe hunger. This led to behavioural changes in their older son – who became aggressive and nervous. The parents were concerned by the changes, believing them to be a mental health issue because it was a change from how their son normally

acted. There were implications for other members of the household, with the son's subsequent migration to Addis Ababa causing affective distress for the mother and the younger children in the household.

'One night we had a very small amount of food for dinner and our eldest son was not happy for that and he complained and said, "I wish one of us (from the family) to be eroded by the flood in order that the number of hands competing for limited food is decreased". We were shocked by his comment and I [the mother] responded shouting, "If somebody is to be flooded, I wish it to be you." Then he became angry and disappeared in the morning. I still regret my response.' (Mother).

'I feel sad when my brothers were migrated and I cried when my father was following them. It was a very difficult time for our family. Especially I was scared for my father being an old man. I usually talk to my father for any worry and stress, that's why I was depressed while my father was migrated.'(Daughter, 8).

'I [mother] was frustrated and in stress when my two sons and my husband were migrated to Addis Ababa. I was worried very much about my husband…I was in stress until I saw him home. Missing a husband/father from a family is just like a house with no door. You are always scared.' (Mother).

The eldest son dropped out of school before the drought, finishing in Grade 6, whilst his brother dropped out of school in Grade 9 to migrate. There was no treatment for his stress and he moved to Addis Ababa. The family reported that he suffered an injury in Addis Ababa in 2015, whilst working on a construction site. He broke his leg falling down stairs in a four-storey building and was admitted to hospital for three months.

'*We are worried that our sons are working in risky labour, with minimum wages that are not sufficient for their subsistence.' (Father).*

'They cannot be professionals or they cannot get better jobs for better payments. Their fates only depend on unskilled casual labour with very small wage that will have long-term effect on their lives.' (Father).

The girls in the household were responsible for collecting water. Because of the shortages in water, the family started using a borehole – they had previously collected water from natural springs (that dried up during the drought). The borehole was around a 45-minute walk from their house. The girls reported that their responsibilities were reduced during the drought:

'*Cooking was reduced during the drought. When cooking was reduced, then fetching water and fuel wood was also reduced. I used to fetch water and fuel wood during the drought year less frequently than during the good harvest.*' (Daughter, 18).

The migration of the sons, however, had an impact on the responsibilities undertaken by the daughters. The eldest daughter did not undertake weeding whilst her brothers were living at the house and she would also not have engaged in daily canal construction labour, but she did so to bring in money to support the household.

Hunger was the biggest challenge, and the children reported that this affected their performance at school. The eldest daughter, although able to continue with her education at secondary school in Korem, said:

'*I couldn't hear properly what the teacher was talking about, because I was listening to my stomach.*' (Daughter, 18).

The younger daughter had to miss schooling for 10 days during the drought year, because of illness and responsibilities to take their calf to their aunt's house in order to find feed resources. When the child tried to re-join the class she said the school told her she was not able to enter. Her mother was able to negotiate by explaining the reason for the child missing the class. However, this was distressing for the daughter:

'*I was shocked when my teacher denied me to enter into the classroom, I thought I will be missed from school forever.*' (Daughter, 8).

Although food availability has recovered because of production through irrigation activities and rain-fed agriculture, the children in the household still reported that the quality of their food supply was not the same as before the drought. It had been significantly affected by the loss of their livestock, and the fact that they did not have access to milk and meat. The youngest daughter said she ate meat in May 2017 but has not eaten it since.

Box 27 Afar – Addu – Megale HHCS

Household composition: The household was headed by a 40-year-old man, living with his wife (30 years old) and their eight children (three daughters, aged 15, 12, and four; and five sons, aged 10, eight, six, two, and less than one). Whilst the household head had not attended school, the eldest daughter and eldest son were in school, having obtained Grade 5 and Grade 4, respectively. The household comprised two buildings, made from 'finger counting wood', with a plastic covering bound together with rope. One building provided the living area for all family members, and the other served as the kitchen (where milk was boiled and bread baked). Although built in the style of a 'mobile home', the household head indicated that the structure had been permanent for around 17 years, with the plastic coverings renewed periodically when they were worn/damaged. The family practised open defecation and liquid as well as dry waste were disposed of in the surrounding areas. Acacia and other bushes were used for fuelwood, and there was no access to electricity.

Livelihoods and income: Livestock production and sale formed the main livelihood base and source of income. Before the drought, the household reported having six camels, four cattle, 40 goats, and six sheep. However, during the drought, shortage of animal feed, as well as a shortage of household food, led to livestock deaths as well as decisions to sell. Of their original herd, two camels died and three were sold; one cow died and one was sold; 10 goats died and 10 were sold; and one sheep died and three were sold.

The decline in market prices (with drops in the price of a camel reported by the household head as being from ETB 10,000 to ETB 4,500) meant that, in the immediate term, the income which the household received was greatly decreased. In the longer term, the household head indicated that the household was still less able to make sales because of their reduced herd size (which has not recovered). Indeed, the remaining stock was reported by all household members as being four sheep, 10 goats, two cattle, and one camel (used mainly for transportation).

> '*Before the drought we had six camels, four cattle, 30 goats, and six sheep but during the time two camels are dead and three sold; out of the four cattle one dead and one sold; of the 30 goats 10 dead and 10 sold; out of six sheep one dead and two sold. I remembered two of our camels died falling down (…) while searching for feed in steep hillsides.*' (Son, 10).

The household head reported being involved in daily labour from time to time, including on a road construction project in the *kebele*, however this was on a fairly *ad hoc* basis: '*I only involved when I get the opportunity, the project continues but I am not working.*' (Father). However, thinking to the future, there was a sense that labour opportunities could provide a way for the household head to generate income in order to be able to support his children through school (which was desired, despite constraints): '*We didn't want to remove our children from school even if another shock comes (…) I will search for more casual work in the neighbouring area to support my family.*' (Father). Additionally, the household classified wheat provided by the government as an important income source, amounting to 150 kg of wheat for the household.

Expenditure and consumption: The household's main expenditure was on food (wheat/wheat flour, edible oil, and sauce components/spices), clothing, educational materials, and medical expenses/transportation. During the drought, the prices of wheat and wheat flour increased from ETB 600 per quintal to ETB 800 per quintal (reported by household head) – which forced a reduction in household consumption, with the use of wheat flour limited to that received as external support. This, along with reduced income from livestock sales, had a significant effect on expenditure decisions. Indeed, reflecting on the death of two camels, the household head stated: '*…I could have bought 11 quintals of wheat which would be enough for my family to finance their food expenses for 10 months.*' Furthermore, given the centrality of milk and dairy products in the household's 'normal' diet, the loss of livestock, as well as the diminished productivity of those that remained with the household, meant that milk products were available only in a limited quantity:

> '*During the normal time I used to drink milk when I feel thirsty and I used to eat bread any time I feel hungry. But during the drought period our family's milk supply highly decreased and my milk consumption was reduced to only two times a day only in the morning and evening. Before the drought we used to eat factory-processed wheat flour, which was very white and fine, in the form of porridge with yoghurt and butter but after the drought we feed on wheat grain that my parents have received from government emergency aid.*' (Son, 10).

Coping mechanisms: The household's coping strategies were limited by a number of factors, including opportunities and resources available locally, as well as the composition of the household itself. Indeed, there was no access to financial services, and the household head reported that '*microfinance was not permitted in Islam*'. The household had no savings, partly on account of restrictions around engaging in financial institutions, and because: '*We don't have enough for living, let alone saving. If we get money, we don't need to save it in banks…In our community, saving is purchasing and having many livestock.*' (Father).

Furthermore, the household head was clear that it would be inappropriate for girls to undertake daily labour (given their responsibilities at home), whilst the sons in the

household were considered to be too young to engage in waged labour. It also seems that daily labour opportunities were fairly limited in the nearby areas.

The frequency of meals was reduced for all members of the household. There were also changes to the diet – with bread called *Birkuta* (not eaten during good seasons) replacing normal bread, *Shiro* introduced (replacing milk and yoghurt as a protein source), and water also used in the place of milk.

'*During the normal period I used to eat bread with milk. During the draught period the bread was substituted by* Birkuta *and the milk was substituted by water.* Birkuta *is made of wheat flour but the* Birkuta *is inferior as compared to the normally baked bread.*' (Daughter, 15).

The household indicated that eating and consumption had been normalised to some extent following the drought, with good rains meaning that households were able to get some milk. However, they said that production remained lower than previously because of the extent to which goat and cattle stocks had been diminished. There was also a sense that, should another shock come, they would employ the same strategies – but with concerns that their stock was too small now to survive.

'*The amount is not the same as that level before the drought because the number of goats and cattle was reduced. Even if there was good rain, due to the small number of animals we didn't get enough milk.*' (Father).

'*If rain fails again, we will reduce our milk and even we wouldn't get a small amount of milk. The small number of livestock we have will also die.*' (Father).

In terms of migration, the father emphasised that there had been no migration in the household – with only the livestock sent to nearby areas with other community members. Yet both of the children indicated that there had been migration for some period of time – with the eldest son (aged 10) having gone away for some period of time.

'*During the drought time I have been migrated to an area known as Raya-Azebo [Tigray region] two days' walking distance, together with my friends. We have been migrated with our camels and cattle and stayed there for six months.*' (Son, 10).

External support received: Relief aid and PSNP support received during the drought period took on additional importance than during 'normal' times. The family used the support provided to maintain consumption at a certain level, and – in this regard – the extended provision from six months to the whole year was valued. Beyond this, the children received *fafa* whilst they were at school – and the older girl also received edible oil (2 litres). Despite this support, both children dropped out of school (see below).

Impact on children: Changes in consumption, as well as water shortages, had a direct impact on the children. Indeed, the reduction in milk created stress ('*Children, when they didn't get milk, they cried a lot*', (Father))

and reduced food availability also caused fatigue). There were also health effects, with the older daughter reporting having suffered from sickness as a result of drinking impure water.

'*Children become thin and short…Not getting enough food and milk has a negative impact on their mental strength.*' (Father).

'*The water was not pure, we used to dig the sands and it was not clean. I used to drink that water and I become ill.*' (Daughter, 15).

The severe shortage of water meant children (and women) were required to travel greatly increased distances in order to find water – with the three-hour round trip increased to an eight-hour round trip. There was no water availability at the school, meaning children had to carry the water they needed to classes or leave in order to be able to fetch water. These factors combined – alongside the expectations that the daughter would support her mother at home – meant the older daughter was too tired to attend school. She dropped out for a year during the drought. Responsibilities for looking after the livestock also meant the eldest son dropped out of school.

'*With empty stomach we travelled long distance to fetch water and this creates higher impact on me … I dropped out because of sickness and lack of food. The school far from our locality and took me over one hour for single trip. I couldn't travel to the school, especially during the hot season.*' (Daughter, 15).

'*In 2015–16 I missed school one year because I have been migrated to another area with my livestock and stayed there for six months. Many of my friends have similarly missed school for one year because of the migration.*' (Son, 10).

'*During the drought, we couldn't get water from nearer areas and we need to travel longer distances to fetch water. Travelling longer distance to fetch water instead of going to school made our daughter very sad.*' (Father).

Although both of the children re-joined school the following year, the period they had missed school meant that they were a year behind. Whilst the older daughter wished to take her education to the highest level (university) and become a doctor, she was concerned that – given her age and the culture, as well as the risk of future drought – she would not be able to reach her desired level at school before she was pressured to get married. The boy was similarly concerned that his education would be affected by recurrent drought.

'*Given the cultural pressure to get married early and dropping out from school when draught occurs, I am afraid I might not complete my education …I am afraid that my aspiration will be discontinued by the decision of my parents. I fear my parents will marry me and discontinue my education.*' (Eldest daughter).

'*I still have a fear drought will affect my school enrolment. Because I know that if drought happens I will be migrated and drop out of school again.*' (Eldest son).

Box 28 Oromia – Shashemene Zuria – Faji Gole HHCS

Household composition: The household consisted of nine members: a couple (husband/household head, aged 33; wife aged ~29), the husband's mother (aged over 50), and six children (males aged: 18, 10, and three; females aged 15, nine, and seven). However, the 18-year-old boy had left home recently to attend religious school away from the *kebele*, with plans to find a family to sponsor his accommodation and studies, having had no formal education previously. The husband had completed Grade 8, whilst – of the children - the 15-year-old girl had dropped out of education (grade not reported), and the 10-year-old boy was in Grade 4, the nine-year-old girl in Grade 3, and the seven-year-old girl in Grade 1. The family lived in one small hut – which belonged to someone else (as theirs had been destroyed in a fire some years earlier). There was a substantial hole in the roof that allowed rain into the house, and they slept on the floor and cooked in the same hut, with no electricity connection.

Livelihoods and income: The grandmother owned one hectare of land, which was the household's only asset, as they had sold their livestock gradually over the years (in 2012 they had owned 10 cattle). They grew crops (mainly *teff* and haricot beans) for consumption and sale, with a decision to grow *teff* in place of maize because of the higher values at which it could be sold. However, harvests on the land had repeatedly failed, and half of the land was currently fallow as the family could not afford to purchase the necessary inputs.

During the drought year, crop yields completely failed and in this year (2017) there had been a marked reduction in productivity, with the harvest of *teff* having completely failed during the *belg* season. Indeed, production had gradually worsened over time (25 quintals per hectare was reduced to an absolute maximum of 10 quintals).

The household's livelihood was largely reliant on work undertaken as daily labourers. The father worked at night as a guard and during the day on construction sites. All of the children, except the infant son, and the son who had recently moved away to study at Koranic school, were engaged in some form of income-generating activity: the 10-year-old boy undertook various activities, including collecting/selling grass/selling sugar/agricultural work; the 15-year-old daughter was engaged in petty trading (but had previously worked in a café); and the two younger daughters collected grass for sale (and consumption). The husband reported, at times, being able to earn around ETB 100 a day, whilst the daughter's previous work in daily labour (for a year period) earnt her ETB 5 per day (up to ETB 100 per month). The 10-year-old son said he was able to get ETB 30 for two days' work selling grass, and ETB 35 when he worked in agricultural work.

Expenditure and consumption: Due to their low production, the household's main expenditure was on food for consumption, purchased at the local market. This included buying coffee, maize, salt, *shalele*, potatoes, and *qat*. The household occasionally purchased seeds, when they had enough money.

Healthcare costs had been a significant burden in recent years, and one of the driving factors for the sale of livestock. Indeed, following the wife's sickness in 2015, the father made the decision to sell a cow in order to pay for her healthcare. Furthermore, they had met with medical expenses for their oldest daughter recently, which they financed by selling *teff*. Over time, more generally, and during the drought specifically, their expenses had increased due to the increase in the cost of maize, which was said to have more than doubled because of low supply in the area (from ETB 400–500 per kg to over ETB 1,000 per kg). This (and their very low productive capacity) was in turn affecting their consumption – which, still now but especially during the drought, was of lower-quality foods (including *shalele* grass) and at a much lower frequency. Potatoes had also replaced maize because they were cheaper to purchase.

> '*In the morning we drink coffee and eat some* shalele. *If I get some Birr I will buy some coffee to support my mother.*' (Son, 10).

Coping mechanisms: The household's coping mechanisms during the drought period were an intensified version of their 'normal' livelihoods strategies, affected by the broader status of the household in terms of productive capacity and the wider options available to them. As such, whilst all members of the household (aside from the wife and the infant child) worked in income-generating activities, this was not something new. Indeed, as the father stated: '*Children work because we don't have anything.*' (See impacts on children below).

External support received: The *woreda* is not enrolled in the PSNP but the family had received various types of emergency and development assistance over the years. In 2016 the wife received Plumpy Nut for the (at the time) three-month-old son because growth monitoring identified him as being

malnourished. Notably, during the drought period the household received aid – which was given to the wife – and which comprised food (maize) as well as sometimes cash. Food support, however, had not been continued for the family, even though they reported not being able to meet their consumption needs due to the failed rains this season – and they expressed a desire that this type of support be continued.

Beyond the immediate value of the food support, the father also said that it meant they were able to borrow because people would trust them to make repayments (whilst now this was not the case). In 2015, the household took a loan from the Oromia Saving and Credit Share Company to buy seeds and fertiliser, but they have been unable to repay this because of the high interest rate (19%) and the fact that their harvest of *teff* subsequently failed. It was estimated that the loan amount had increased to around ETB 4,000 – and the father was being threatened with court action by the company. The grandmother considered that the only option – to avoid facing imprisonment or having their land seized – was to sell their land.

Impact on children: The pressures faced by the household in terms of meeting their consumption needs were having significant and obvious impacts on the children within the household. The impacts, especially on education, children's time use, and their involvement in labour outside the house, however, were part of their 'normal' livelihood model rather than being as a result of the El Niño drought specifically. The father was acutely aware of the situation, explaining:

'*If climate change continues in this way, you will hate yourself and hate others – it can lead to disagreements in the household. For children as small as 10 years old, going to urban areas has an impact on the household. The problems mainly affect women and children – children need nutritional support, they are not resistant, they don't have enough food. I'm unable to meet the basic needs of the children…Look at the children, they are not well fed, they do not have enough clothing…*

Sometimes there is conflict...if loss of peace is coupled with loss of resources, we wouldn't have existed. If things continue to get worse, you start to hate yourself – so you hate everybody else. Sometimes when I come back from home with no money, I stop moving in the road, I do not want to go home and disappoint my family.' (Father).

For the oldest daughter – who had stopped going to school two years previously on account of being been unable to afford educational materials– she was considering the possibilities available to her. She felt that, despite her desire to return to school, there was no way out of her situation, knowing that her father was unable to fund her education/school materials. She was also socially excluded on account of her '*poor clothes and lack of materials*'.

'*If I had the authority I will distribute exercise books for those who want to go to school.*' (Daughter, 15).

Whilst she had been engaged in labour activities, including the preparation of chips at a café in the *kebele*, the work was intensive (over 12-hour days), with small returns – and she became sick with a kidney issue. The money she received was not enough to support her, her family, and her education, and she expressed a desire to go to Shashemene to work as a maid, or something similar. Her parents would not permit her to go, given concerns for her safety – especially that the girl may be harassed by boys when out in the town/on the road. Indeed, there had been an attempt by a boy to abduct the girl for marriage, and the father had made the parents of the boy pay the costs, whilst the girl made clear that she had no desire to get married at this point in time, knowing '*friends who are married who are in trouble*'.

Whilst the 10-year-old son was managing to balance his education with work (including hoeing, and selling sugar on the streets in Shashemene), he said that he '*packs in so many jobs now*' that he was sick and out of school for some time. In 2015–16, school absences were caused by not having enough food and going to school without having had breakfast. Given the household situation, he continued to face pressure to provide income to support his family.

'*I have never* dropped *from school. I did Grade 1 twice, but ranked top in Grade 2, ranked second in Grade 3, and now promoted to Grade 4.*' (Son, 10).

'*My family doesn't even have 1 Birr – they can't even buy diesel for lighting.*' (Son, 10).

Box 29 SNNPR – Boricha – Maddo Mukeneka – HHCS

Household composition: There were eight family members regularly living in the household. The male household head was aged 64 and married to a 40-year-old woman. The couple had six children, two of whom were girls (aged 14 and 12) and four of whom were boys (aged 23, 21, 17, and 15). Although the eldest son graduated with a diploma, he remained unemployed and was living with his family, having not yet established an independent household. The husband attended school up to Grade 7, having dropped out during the imperial regime to get married. The house, comprising one room, was made of mud, grass, and wood, and was home to the family as well as the cattle (who stayed indoors because there were wild animals in the area). Open defecation was practised.

Livelihood and income: The household had half a hectare of land in the vicinity and another small plot in another *kebele*. Whilst they owned a cow, they had lost many of their livestock due to the drought and subsequent crop failure (three sheep died and three oxen were sold – at a significantly reduced price).

'*An ox that can be valued at some ETB 6,000 during the good times was sold for only 3,000 and a sheep that can be valued at ETB 2,000 during the good times was sold at ETB 1,000 during the drought.*' (Father).

They looked after livestock for others, with an arrangement in place for sharing calves. Previously they grew maize, haricot bean, *teff*, sweet potato, potato and *kocho / enset*. However, drought and pest infestation had affected their production, including the *kocho / enset* significantly – reducing the extent to which their harvest could support them throughout the year, being sufficient to cover household needs for only three months (from September to November). The wife of the household was engaged in petty trade, buying and selling maize at the Balila market (something which she had started doing in response to the drought).

Expenditure and consumption: Expenditure – outside the harvest season – was mainly on food products to meet consumption needs (*kocho / inset*, maize, spices, coffee, and salt), as well as firewood and educational materials for their children. Increasing prices – especially noticed during the drought period, with a kilo of maize increasing to ETB 13.5 per kg (from ETB 4–5 per kg, when it had '*never jumped beyond 6 Birr per kg before*') – had affected household purchasing capacity. Although prices had decline since the end of the drought, they were still high at ETB 9 per kg. These considerations, and reduced availability of animal products (milk, butter) as a result of the severe shortages of animal feed in the area, affected household consumption. Previously, allocation of food had been based on consumption need – but during the drought everybody ate a very small amount. One local flat bread (*kita*) was shared between more family members and eaten with local cabbage, whilst *kocho / enset* disappeared. Older household members '"*matched" the children*' and men were more likely to eat away from the home.

'*Previously we used to eat food products of* kocho / enset. *There is no such thing now, as it is infested and dried out due to the drought and water shortage. Previously, we eat three to four times a day. After the drought, it is okay if we are able to get one meal per day.*' (Father).

*'We used to eat animal products, such as milk and butter, in our meal. In addition to these we used to eat false banana (*kocho / enset*),* bula*, boiled root of* kocho*, potato, sweet potato and cabbage…We eat when we get food, rather than when we get hungry.*' (Son, 17).

External support received: The household was a regular beneficiary of the PSNP, and – using their regular cash transfers – had been able to save a total of ETB 960 at the OMO Micro Finance Institute. The older child indicated that the PSNP enabled the parents to buy food for their children and this was considered important. The family had received animal feed, provided for affected households – but they reported that the amounts were small and, ultimately, inadequate in terms of resolving the extent of the problems. School feeding enabled the younger daughter to eat, even when there was no food available at home:

'*Sometimes I go to school without eating my breakfast. When there is school feeding, I eat from school.*' (Daughter, 10).

Water was trucked to the *kebele*, but this was largely problematic, both in terms of volume received, as well as accessibility – with the amount not meeting the demands of the large population and being delivered to a central *kebele* location that many were unable to reach. This was an area where the household considered there was need for significant intervention:

'*Especially provision of potable water supply should be given attention, as staple foods can be bought from markets, while it is very difficult*

to access potable water in the area during the drought events.' (Father).

Coping strategies: Aside from the altered consumption, the household adopted a number of coping strategies – notably borrowing, migration for labour, and selling of livestock (see above). A loan was taken in 2016 for ETB 1,900 from a better-off household (relying on their social capital), in order to purchase maize and *kocho*. This loan was interest-free – but had not been repaid by 2017.

Migration was intimately linked to the food situation in the household, and was a recurrent feature of the household's livelihood model, rather than a 'one-off' response strategy to the drought (although it did generally increase during the drought). The 17-year-old son migrated to Addis Ababa regularly and periodically and had done since he was 12 years old, to engage in daily labour. However, another son had moved to Addis Ababa and stayed there for a year (this was one of the older sons, above 18). Despite reluctance that children should have to migrate and work, it was considered necessary by the household.

'*As they should not die of hunger being with us, we allowed them to go and try their best in generating income for both themselves and their families. We then gave them money for their transport cost and send them. We send them to other places that we don't know, not because we want it but we were forced by the drought.*' (Father).

'*I involve in paid labour being forced by the drought. I am not happy for involving in the paid labour. The payment is also not equal to the work I perform. Working the whole day, I only paid 20 Birr.*' (Son, 17).

'I went to Addis Ababa in 2008 and 2009 E.C. [2015 and 2016 G.C.]. Engaging in paid labour there I bought clothes and mobile phone for myself. One of my brothers also went to Addis Ababa and stayed there for a year. The other also went to Addis Ababa and stayed there for two months. The out-migration helped our family to resolve the drought driven shortages as we send money for them.' (Son, 17).

Impact on children: The impacts of the drought on children were closely related to the coping strategies adopted during the drought (e.g. of migration and intensified engagement in child labour), but more significantly to the extent that these were part of 'normal life'. Notably, impacts were felt in the form of disrupted education, but also the direct exposure to risks on work sites and wider, affective impacts on the children who remained behind.

'*I fear I might be physically harmed by injured by nails and that construction materials might fall on me and by others.*' (Son, 17).

'*When my brothers go to Addis Ababa I become sad. I prefer they shall not go away from us. I cried the first time the go away from us. But the second time they go, I didn't cry.*' (Daughter, 10).

Children's performance at school was fairly poor, with limited access to appropriate materials, as well as difficulty concentrating on account of the family's economic situation and the need to work alongside study. Indeed, the 'best performing' son had dropped out and migrated to Addis Ababa and the father emphasised that, despite a desire to study, the family repeatedly struggled to meet needs (in terms of materials, clothing, and food). Following the drought, only two children were registered in school for the 2017/18 academic year. There were concerns about how this might affect the children in the future.

'*The drought forced me to go away from my locality. It forced me not to live with my family in my locality. It made me drop out of school. It forced us to live in poverty. I go to Addis Ababa every year, for at least two months to support myself and my family. As much as possible I try to go when schools are closed.*' (Son, 17).

'*We fear that they couldn't achieve their aspirations as they are attentively attending their school because of our economic problem.*' (Father).

'*I worried when I drop out of school thinking that I might be left behind my peers*.' (Daughter, 10).

'*I didn't change my aspiration still. But I fear that if the occurrence of the drought continues, I might lose the chance to continue my education and might leave it forever, and hence might not achieve my aspiration.*' (Son, 17).

Box 30 Amhara – Guba Lafto – Sivilkay HHCS

Household composition: The case study household in Sivilkay was small, comprising only five people. The household was headed by a widow, whose husband, the main breadwinner, had died of AIDS during the drought. Household goods were in a poor condition, and the youngest daughter had a bad cough and runny nose at the time of the research. The household had no electricity connection, and used wood for fuel.

This household was exceptionally vulnerable when the El Niño drought hit, and was very poorly placed to weather the multiple and combined shocks of the drought and their own personal circumstances. Their case study is included here because it shows us some of the especially negative impacts on childhood well-being which can be expected in households which have pre-existing vulnerabilities.

Livelihood and income: Prior to the El Niño event, the family used to own two oxen, a cow, and a calf. The livestock was used to plough the family's farmland, to produce milk for household consumption, and also as collateral for loans. The main income source for the family was the farm, which was worked only by family members. Before the drought, the family was poor but self-sufficient, producing maize and *teff*—the latter was sold in order to generate income for other market purchases. That said, even before El Niño struck, the family sent their two older boys to live with relatively better-off families as servants, which gives us an idea of their economic situation prior to the shock.

The family was hit hard by both the El Niño drought, and simultaneously by the husband's worsening health: they sold one ox for ETB 5,000 (half the usual price, according to the interview with the household head) in order to cover medical costs incurred when they were forced to take the husband to Dessie referral hospital. According to the widow: '*As we reached there, they saw him and said that his illness was due to a shortage of food [malnutrition]. They advised us to feed him, and we returned without any improvement to his health. Not losing hope, I took him to Woldiya hospital, where he stayed for a month before dying. The community helped me to bring him to be buried in our locality.*' (Household head, Mother). Their other livestock died from lack of water. The widow was thus left with no draught animals, and no productive labour, and was forced to give most of their agricultural land to another farmer, on the understanding that they would then be able to share in the production. As their bargaining power was poor, they did not receive much from this arrangement. They now have half a hectare of farmland left, and the older boy, returned from an unsuccessful effort at economic migration to Saudi Arabia, exchanges two days of ploughing another farmer's land for a day's loan of oxen to plough their farm.

Expenditure and consumption: According to the widow, their main expense is related to food items. They use money to buy finger millet, maize, and sorghum. They also spend money to buy salt, pepper, and, when there is some extra money, items like sugar and edible oil are included. Better-off families in the *kebele* are expected to pay ETB 150 for health

insurance. The head of household said that this is unaffordable for her family and she is not covered by health insurance. Farm produce like grain as well as other commodities became expensive following the drought. For example, the cost of exercise books for students jumped from ETB 90 to ETB 120 per packet after the drought hit the area.

During the drought, the family was barely able to feed itself. According to the widow, cooking stopped. Locally baked thin bread made from sorghum was served once a day, generally to the children. As she explained, at that time:

> '*My husband and I were reluctant to eat the small amount of bread as it was not enough even for the kids. My husband always left home very early in the morning so as not to see the painful situation at home. Both of us knew we are dying. But we fought for the kids. Unfortunately, he lost the battle.*' (Household head, Mother).

Since they have been left with almost no resources at home, the family has spent no money on any form of productive investment, and has been highly dependent on income earned from the labour of the two older boys, who were sent to work as cattle herders and farm labourers for other families.

Coping mechanisms: This family, even before the drought struck, was in an especially vulnerable situation because three members of the household were HIV-positive. When the drought hit, and the father's health deteriorated, a spiralling decline began. Various coping mechanisms were employed. First, consumption was cut: meal size and frequency dropped, and dietary diversity was reduced – children were fed small portions twice a day instead of normal portions three times per day, while the adults (both HIV-positive) sometimes went whole days without eating. The less desirable red sorghum was substituted for wheat, maize and *teff*. Wild fruits and leaves were added to the diet.

The next strategy was economic migration: as described, both of the older boys in this family engaged—or attempted to engage—in economic migration as a coping strategy. They were not strangers to working outside of their home, because even before the drought they worked as cattle herders for other families. During El Niño, the younger boy was sent farther away to live with another family, as a servant and cattle herder. Conditions were terribly difficult: he was fed twice a day, on poorer food than the employer's family. He was put to sleep with the cattle, and, given no blanket, was forced to cover himself with a cardboard box. When ill, he was not taken to the doctor, but forced to continue the cattle work. At times, the workload, exhaustion, and physical pain caused him to break down and cry. Meanwhile, his older brother, during the drought, attempted to migrate to Saudi Arabia, but fell into the hands of traffickers, who mistreated him badly in Yemen because he did not have enough money to pay for the journey. Finally released into the desert, he crossed the border into Saudi Arabia, where he was arrested by the border guards and deported to Addis Ababa: the migration was a failure.

External support received: The family is not included in the PSNP. According to the widow, they were not included because during the targeting period they owned both cattle and land. Being Muslim, the family is not allowed to borrow money, which requires interest payments. Consequently, this family was unable to take advantage of the local lending institutions during and after the drought: '*One cannot borrow money from formal institution that require interest payment. If the community becomes aware of someone who borrows money including an interest, no-one will bury him/her when they die…and we want to follow the Sharia.*' Instead, the family received support from the local Muslim community in different forms, including *Zakat,* The family no longer has assets which can serve as collateral.

Impact on children: The impact of El Niño upon the children of this household was significant. Both older boys suffered during their economic migration experiences, as described above. The older boy said '*I feel frustration and hopelessness. The weather is not promising even today. I'm not married. I don't feel part of this community. My hope to travel and work in Saudi is damaged. Thinking about the future is difficult for me.*' (Amhara, Sivilkay *kebele*, HHCS interview with older boy). Additionally, all the children of the family suffered the impacts of the drought on consumption levels, which had especially detrimental effects upon their diets. The youngest boy in the family told our interview team that he was stressed and unhappy, unable to concentrate at school and beset by feelings of inferiority:

> '*My mind is never refreshed with playing and having enough food, as a result I encounter a difficulty to understand the lesson at school and lose my rank. In addition, I felt as I am inferior to my friends. Consequently I prefer to stay alone rather than playing with them. Physically I am getting very thin from time to time.*' (Son).

7 Summary and conclusions

The 2015–16 El Niño drought was neither an unfamiliar nor an unpredictable event: it was a severe iteration of a long-standing weather pattern afflicting Ethiopia and the Horn of Africa. The water shortages, crop failures, livestock die-offs, and immediate consumption shocks felt at the household level had all happened before. This time around, however, a relatively robust (albeit delayed and beset by some challenges) humanitarian response helped prevent the large numbers of human deaths which characterised earlier droughts, such as that which resulted in the 1983–1985 famine or indeed the more recent 2011 drought. The 2011 event resulted in between 50,000 and 100,000 deaths, more than half of them in the under-five population, in affected areas of Ethiopia, Somalia, and Kenya[103]. It also needs to be said that the comparatively functional and calm political and humanitarian context of the 2015–16 El Niño event made relief delivery more viable and effective than in past droughts.

None of this should lead us to underestimate the impacts of the 2015–16 El Niño drought. Impacts were highly significant, particularly on the well-being of children and young people. Short-term effects were as might be expected in the context of crop failure, livestock death, and sudden water shortage: a contraction of the domestic economy, with drops in real purchasing power and concomitantly consumption; a reduction in available food, either produced or purchased, which was experienced as reductions and constraints on meal frequency, size, and diversity, as well as in the form of dietary substitutions and negative modifications; increased moderate and severe acute malnutrition rates, although the worst of these were mitigated by the emergency response; a lack of clean water for drinking and washing experienced everywhere, which may have contributed to an increase in skin problems and diarrheal diseases; and shrinking of the asset base, particularly in terms of livestock, through death and destocking.

In order to mitigate the worst of these immediate effects, families in our study *kebeles* (and presumably elsewhere) engaged in a range of coping strategies which, like the drought itself, were really intensifications of existing strategies rather than innovations: thus, while women had always been in charge of fetching water, this activity now involved longer journeys to more remote water points, as well as waiting in long queues at even these remote points. Transhumant journeys to better pasturelands and more accessible

[103] UK Department for International Development estimate.

water were traditional in pastoralist communities, and even to some degree in agro-pastoralist ones. Yet under the El Niño conditions, these journeys became longer in distance and duration as water and pastures were farther away. Younger children were increasingly left alone at home as parents and older siblings travelled for water, work, or grazing. Economic migration among older boys increased, and younger boys in some communities began to seek waged jobs on local construction sites. In spite of school feeding programmes being implemented in some areas for varying durations, school attendance and performance suffered, for several reasons: hunger, lack of materials and money to buy them, participation in waged work, or increased household responsibilities. Social effects included delayed marriages, and negative effects on social capital because resource shortages constrained normal responses of altruism and reciprocity. In clan-organised pastoralist areas, fear of conflicts increased with the need for territorial encroachment while seeking water.

Local financial services were limited, and in pastoralist *kebeles* almost non-existent. Where credit, micro finance, and rotating savings schemes did exist, they tended to be used not as originally intended (to capitalise productive investments) but for direct consumption, to buy food. This in itself is symptomatic of the severity of the situation, and is in fact a microcosm of a central problematic: in the urgency of meeting immediate consumption needs, longer-term production needs were deprioritised. To return to a critical point made in the response to Research Question 3 (considering external support and its influence on children's well-being), the focus was on saving lives rather than livelihoods.

A capabilities approach to well-being, set within the lens of resilience, is comprehensive insofar as it includes not only tangible dimensions, such as food, water, health, education, and shelter, but more subjective areas, such as affect and emotional well-being – and how these will play out into the future. Children who participated in this study spoke of worry, anxiety, and fear at the prospect of other droughts in the future, as well as sadness at the losses and hardships experienced by their families. They also talked of the increased stresses and tensions in their homes and communities, and referred to a lack of time to play. Like children everywhere, those who participated in this study had aspirations and dreams for the future. For many children, these dreams and aspirations centred on escaping the hardships and grinding realities of *kebele* life, to become urban-dwellers with white-collar jobs, or to train as doctors and teachers and return to serve their communities in this capacity.

While often similar, short-term effects and available coping strategies did vary to some degree across the study sample. The dominant livelihoods type was probably the single most important variable determining both household-level effects and characteristic coping strategies. That said, household profiles, particularly in terms of assets and vulnerabilities, were also important drivers and mediators, as shown in the case studies presented in responses to Research Question 2, which considered how coping mechanisms affected children's well-being.

Long-term threats are real, and in general were not addressed by the coping strategies described in the response to Research Question 2: coping strategies deployed during and soon after the 2015–20 El Niño were very much focused on immediate relief and on mitigating the most acute short-term effects of the drought. In fact, some of these coping strategies arguably have negative implications when we consider the longer-term threats to children's well-being, particularly around the issue of education. None of the coping strategies deployed by households in our study served to reduce long-term threats posed by chronically poor diet and food insecurity (leading to stunting). Nor did they address questions of WASH: access to water is still vulnerable to future droughts, and quotidian sanitation practices, such as open defecation, remain both normative and problematic. Livelihoods have not been adapted and are no more resilient and no less vulnerable than they were before the 2015–16 drought. Endogenous solutions were lacking and dependency on external aid provided by the government or civil society remained high.

In considering the two components of Research Question 3 (regarding the influence of external interventions on children's well-being), we explored and reported on the programme and policy response to the El Niño drought of 2015–16 – as well as considering how this was experienced at the community level. The strong role, compared to previous cases, that the GOE played in mobilising the response and development partner coordination was noted. The NDRMC did not appear to significantly influence the response, which is disappointing but perhaps not surprising given that it was a relatively young institution with limited human resource capacity at the time of the El Niño event. The role it plays in future climate-related disasters could be an important indicator of Ethiopia's transition towards treating disaster response as a truly cross-cutting area; and, more ambitiously, towards a DRM paradigm where the reduction of risk (and vulnerability) is given equal emphasis to response.

Various challenges and obstacles to an effective response were noted, many of which are familiar to humanitarian situations in general and drought in particular – such as the shortcomings of the early warning system, which probably contributed to the slow response. We discussed the various forms of aid and assistance deployed across our study *kebeles*, including livestock feed (viewed as especially valuable support, especially in pastoralist communities), food aid (which had substantial benefits, although not always optimally realised), school feeding, social protection (in the form of the flagship PSNP), health and nutrition, water supply, and psychosocial support for children, and a range of livelihoods interventions, including alternative agricultural inputs, such as drought-resistant crop varieties and 'improved' livestock. A key point to emerge from these data was that there is still a strong emergency response orientation to the support provided—consequently, the pattern of dependency remains largely in place, and the focus remains on amelioration rather than on building the asset base and strengthening livelihoods resilience in preparation for future droughts or other climate shocks. It is in this space, in which the humanitarian and development sectors both respond to current shocks – and, ultimately, negative coping strategies – and at the same time help build resistance against future crises, where we believe there is most scope for innovative policy and programming.

There are encouraging signs of uptake in this area, with major donors supporting resilience building, and flexible funding, and we discuss this in greater detail in Section 8 below. In general, it is clear that donors can contribute to Ethiopia's strategic approach to managing droughts – not just through providing aid but also by building up the evidence base in terms of what works and what does not work in designing and implementing drought-resilient development pathways that positively influence well-being. In this context, UNICEF can be a key advocate for ensuring that children's needs and aspirations are integrated within a clear strategic framework regarding what resilience entails in the Ethiopian context.


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8 Recommendations for policy, programming, and future research

This section provides recommendations for strengthening and improving interventions that seek to reduce the negative impacts of drought on child well-being. They are intended to speak to UNICEF and development partners working to reduce the impacts of drought on poor households and children, as well as being of relevance to government institutions. However, it should be noted that the recommendations provide relatively broad – and multi-sectoral – considerations for future programming. As such, recommendations will be championed by different stakeholders in the response. In addition, a list of potential areas for further research is provided, drawing from emergent findings from this study and areas that would lend themselves to strengthening future responses, with a particular focus on considering children within this.

8.1 Recommendations for policy and programming

8.1.1 Effective delivery of emergency response

Support the NDRMC to act as an effective focal point for coordinating drought response policy and practice, particularly as regards children's needs.

The institutional location and mandate of the NDRMC allow it to spearhead the design and implementation of response strategies. However, the institution requires significant improvements in terms of technical and operational capacity and resourcing if it is to deliver on this potential. In developing this capacity, UNICEF (and development partners) should work with the NDRMC to improve performance in those areas of the response that are critical to children's well-being (e.g. early warning information, early response, needs assessment, monitoring). In this regard, UNICEF is positioned to provide support to capacity building and dialogue in relation to the potential synergies between Ethiopia's DRM strategy and the 2017 National Children's Policy (as well as sectoral strategies that relate specifically to the needs of children and their caregivers), and to ensuring that the principles of the latter are mainstreamed into the ethos and implementation of the former (and *vice versa*).

Call for, and support, improvements to early warning information and systems.

The findings from this research underline the value of early response to disasters, particularly in mitigating their impact on children's developmental trajectories. Early response actions were particularly important in protecting the herds of pastoralist households, which was critical not only for sustaining children's dietary intake, but in terms of reducing the risks of child labour, migration, and dissolution of social and cultural capital, all of which influence the impacts – immediately and in the long-term – on child well-being. This is an important area of policy and action that UNICEF should support.

As discussed in this report, while there was some evidence of early response to the El Niño event in 2015-16 (particularly in terms of nutrition services and food provision, including through PSNP transfers), these early actions were limited in scale and scope. While real-time climate monitoring platforms, hosted by national and international institutions and networks, are key to early warning, the variable experience of recognising the onset of the 2015-16 El Niño and forecasting its extent and severity suggests there is room for improvement in the data and analysis that these platforms provide. While this work is not directly within UNICEF's remit, it should utilise its position in the wider context to raise the issue and participate in discussions about how such data can be provided in a manner that is useful to those undertaking the response.

Beyond the accuracy of monitoring information, a further problem in the case of the 2015-16 El Niño event was a fragmented and uncoordinated system for generating, sharing, and consolidating information. Lack of communication between the GOE, international actors, and networks appeared to be a key weakness – including about the different projections revealed by different forecasting tools. The NDRMC has the mandate to coordinate early warning information, and development partners should support this institution in undertaking this role.

Support a transition towards a dynamic approach to needs assessment.

Strengthening the link between meteorological forecasts and human and socioeconomic impacts (i.e. needs assessment) is a key area for strengthening a timely response that accurately reflects need. This link is dynamic and should continually inform response strategies during and following a disaster. In Ethiopia, there has been a reliance upon data provided through twice-yearly post-harvest assessments to inform response strategies. A major shortcoming of this system is its lack of timeliness, and hence the constraint it places upon early and rapid response actions. Various stakeholders advocated for a shift in regards to needs assessments, away from reliance on the *belg* and *meher* assessments and towards a reliance on real-time information flows.

UNICEF should participate in ongoing discussions about the opportunities and challenges presented by such a shift, and the technical and operational requirements for undertaking it successfully. Such requirements are considerable: in some areas, such as child protection, mechanisms for ongoing monitoring are limited or non-existent. In others, while such mechanisms exist, they are implemented poorly, reflecting inadequate human capacity and resourcing. There are, however, also important innovations being undertaken to strengthen the timeliness and accuracy of information flows; for example, the Ministry of Education, in partnership with UNICEF, are piloting an approach in 12 *woreda*s in which schools themselves enter data about attendance, which is fed into and processed by a central data system in the same way as the Ministry of Health management information system. There are lessons to be learned from a sector like health, which has a relatively strong early warning system based on its health management information system. UNICEF should encourage dialogue and learning in relation to such examples with the GOE and other development partners, and consider what approaches and tools could be scaled up.

Another area of support relates to improving the monitoring systems for government and development partner programmes, and making them sensitive to drought and child-specific needs. This will likely involve training monitoring specialists on the particular circumstances that are likely to arise in drought events and the types of indicators that are important. For UNICEF, there could be a role in building the capacity of monitoring experts and systems to understand what types of data are critical to understanding the situation of children in the case of droughts.

Support continued efforts to identify and improve the logistics of response efforts, particularly in areas that are critical to child well-being.

While the delivery of the response to the 2015 drought represented an improvement compared to previous droughts (e.g. 2007, 2011), there were numerous and substantial obstacles and delays related to operations and logistics. This research has highlighted the impacts that delayed response can have upon child well-being: for example, in passing critical (and avoidable) 'tipping points' in terms of nutrition, physical and mental health, education and child protection. Passing such tipping points can have lasting impacts for children's development and life prospects. Recognition of the logistical challenges involved in delivering humanitarian relief is not new, and there are ongoing efforts to identify and address the problems – including by the logistics cluster activated by the NDRMC in 2016.[104]

As an international organisation, and furthermore one within the UN system, UNICEF has an important role to play in leveraging global learning and best practice on delivering humanitarian relief to mitigate the impacts of disasters on child well-being. One area for potential focus is a strengthened understanding of opportunities for decentralising logistics and recognising the potential contributions of actors at different scales. The role of local providers was identified strongly in the research, particularly in the context of procurement and delivery of livestock feed, and appeared to demonstrate the positive impacts of local markets and speed of delivery. Procurement through local providers also offers the additional benefit of supporting the local economy. Furthermore, support should go to ensuring inter-cluster dialogue on logistical issues, to ensure that specialist sectoral perspectives feed into and complement the work of the dedicated logistics cluster.

Explore innovations in programme design as a means of improving early response to drought.

This research showed that significant delays in the mobilisation of the response had important consequences for children's well-being, particularly in terms of time use and health. One way to improve early response is through programme design – for instance, through so-called 'crisis modifiers', which are mechanisms built into development programmes that enable rapid reorientation of funds towards emergency response. While there is much anticipation about the potential role these mechanisms could play, the evidence on how to design them effectively is limited, and it would be important to track ongoing trials and research[105]. Some evidence from the inclusion of crisis modifiers in programmes in pastoralist areas of Ethiopia – as well as being highlighted in this research – emphasises the importance of organisational capacity and the expertise of implementing partners, highlighting the need for the introduction of the mechanisms to be accompanied by capacity building of programme staff[106]. Ongoing training for programme staff and development of guidelines/procedures for implementation would be required.

Strengthening existing community-based early warning systems (through awareness-raising, technical tools etc.), as well as establishing these more widely, alongside improving linkages into the national warning system structures, would provide the opportunity for real-time monitoring that better informs response. This would respond to findings emerging from this research which identified that on the ground the drought was

[104] See this report published on 25 April 2016 by the Logistics Cluster; www.logcluster.org/sites/default/files/logistics_cluster_ethiopia_initialgapanalysis_160425.pdf
[105] Valid Evaluations, 2017.
[106] USAID, 2016b.

being recognised/reported much earlier than it was formally announced. Having trained multi-disciplinary Rapid Response Teams which are equipped with appropriate supplies can also help stakeholders to respond to disasters on time.

8.1.2 Building resilience to drought (long-term impacts and recovery)

Strengthen the unifying narrative of 'resilience building' within developmental and humanitarian perspectives on drought.

Given that drought is a pervasive threat in Ethiopia, one whose severity is forecast to increase in line with climate change, it is critical to take a long-term perspective on how to reduce vulnerability and to 'drought-proof' human and socioeconomic development for Ethiopia's poorest communities. Such a perspective looks beyond a single drought and/or a single response to consider what, fundamentally, are the causes of vulnerability (in a broader sense) for communities and specifically for children. This perspective would link the specific consequences of reduced rainfall with other dynamics of poverty and vulnerability, such as those relating to financial and social capital, lack of developmental infrastructure, and market access. Designing interventions based on this fundamental and far-reaching approach is, essentially, a matter of building the resilience of people, and economic and environmental systems. UNICEF should spearhead efforts to include that resilience in discussions about humanitarian and development interventions, recognising its potential role in contributing to both.

Interventions to build children's resilience to drought should be designed on the basis of local realities, and children's perceptions of those realities, as well as their aspirations and priorities. The research showed that the lived realities of young people in drought-affected areas increasingly bridge the rural/urban divide (with migration increasingly significant), and that children's aspirations and likely coping strategies diverge along a number of dimensions, including age (both absolute and relative within a household), gender, socioeconomic background, and geographical location. For instance, in some cases, migration was perceived as a desperate option of last resort, synonymous with the collapse of the cultural fabric and social capital; in others, it was either a regular part of life or/and an opportunity to improve one's life (with the perceived opportunities urban locations represent). UNICEF should advocate for an approach to resilience that is sensitive to the nature of the risks faced (including drought) and to the dynamic nature of the socioeconomic fabric and trajectories in many rural and urban communities.

Ideally through a government-led approach, develop a comprehensive strategy for building children's resilience to droughts that is align with development policy frameworks and is grounded in children's experiences and perspectives.

A resilience strategy would provide an approach to understanding resilience in different contexts, and therefore a basis for designing and coordinating locally-appropriate interventions. Ideally, such a strategy should be anchored within government and aligned with disaster risk, child-specific, and sectoral strategies. Development partners' own strategies for building resilience should be aligned with this central reference. Sectoral development strategy dialogue should also reflect the increasing significance and reality of shifting populations and changing landscapes, taking account of urban and rural perspectives.

MoWCA is a key actor in such dialogue, and UNICEF should provide support to the ministry in regard to understanding the implications of resilience for the national policy framework relating to children, and encouraging others across government and outside to follow its lead. It may be necessary to undertake a capacity gap assessment for MoWCA specifically on the topic of drought response and resilience building, in order to formulate priority support areas.

Ensure resilience interventions are reflected and integrated across sectors, with an emphasis on child-specific dimensions.

Resilience is a cross-cutting topic whose definition and realisation depends upon the perspectives and commitment across various sectors. Furthermore, its meaning should be grounded within the context of those sectors. For UNICEF's sectors of intervention, suggested areas to explore are as follows:

Nutrition and health

- Align with ongoing initiatives to mainstream nutrition into development sectors, including agriculture and social protection (via the PSNP). Furthermore, identify opportunities to align nutrition with climate-proofing agriculture interventions and support interventions to target children at key 'nutrition windows' after infancy and into adolescence, ideally through incorporation into development planning and budgets. One key mechanism could be through support for the institutionalisation of school feeding (in line with the National School Health Nutrition Strategy).

- Undertake a detailed analysis of Mobile Health and Nutrition Teams, recognising the important role that they play in providing health services to remote, migratory, and highly drought-affected communities, but also recognising the shortcomings revealed in this research in terms of capacity, operations, and reaching all community members.
- Advocate for greater attention to be paid to the matter of children's mental health in the case of drought, and particularly in areas where drought is a long-standing problem that interlinks with loss of community resources and development potential. The research showed considerable and widespread affective implications of drought among children, which were manifested in stress, worry, and fear. Sources of support for mental well-being are also an important consideration: while in many cases parents were seen as the foremost resource for seeking help, some children reported that conflicts between their parents were a source of great unhappiness, even driving them to leave home.

WASH

- 'Drought-proof' water supply interventions, to reflect as far as possible changes in the water table during drought incidents. Alongside this, consider the sustainability of the entire water table/watershed when planning water-based development interventions, such as irrigation.
- Continue to raise awareness and support improvements in hygiene and sanitation, using schools as a focal point for best practices and behaviour change, and using Community-Led Total Sanitation/School-Led Total Sanitation approaches to change open defecation customs.
- Given the gender sensitivity of WASH, it would be appropriate to consider undertaking gender analysis as part of intervention design and assessment. This research showed that shortcomings in WASH resources often disadvantage women and girls in particular (e.g. obliging them to spend time collecting water, which has trade-offs with education and can be physically very demanding; and raising specific challenges to dignity and hygiene relating to gender-specific cultural norms around hygiene and menstruation).

Education

- Contribute to building evidence and facilitating dialogue on re-framing the role of schools not only as 'providers of education' but as converging entry points for child well-being during droughts – where the support offered comprises (all or some) nutrition (through school feeding programmes), child protection (through child safe spaces, for example), and WASH, alongside education and skills training. Current experience suggests that such approaches only work when delivered early in a drought situation, before children drop out and/or migrate.
- Consider ways to ensuring attention is paid to (and monitoring is undertaken in respect of) education quality during droughts, as well as continuing to support education provision. In that regard, support efforts to make education more flexible: for instance, allowing for re-integration following periods of absence and considering patterns of classes which are flexible around children's competing commitments.
- Similarly, recognising that children will continue to migrate with or without their families, regardless of interventions in education in their communities, attention should continue to be paid to the provision of temporary education services along migratory routes and destinations, and to the possibility of calibrating academic calendars to seasonal movement. At the same time, there is a need to emphasise the importance of ensuring services – notably schools – can be accessed by children away from their 'home base'. This calls for efforts to facilitate dialogue and advocacy that supports children/households who have migrated to register in their destination woreda.
- Noting evidence (including this study) that shows a positive contribution of school feeding programmes to school attendance, consider the opportunities and challenges for scale-up, including learning lessons from within Ethiopia (e.g. the process of incorporating school feeding into government state budgets, learning from Oromia and SNNPR) and potentially from other countries implementing similar schemes (including, for example, Brazil and Mexico, where school feeding forms a component of the safety net programme).
- Consider how the provision of school materials could be incorporated into a sustainable strategy. The research showed the importance of school materials for children's continued school attendance, though interventions to provide such materials appeared to be dependent on scale-limited and time-limited NGO activities. Lack of materials was repeatedly referenced as a barrier to children's continued schooling.
- Build a narrative (and evidence) that links education to livelihood prospects (see below).

Child protection

- Efforts should be made to mainstream child protection considerations into other sectoral strategies and interventions: for instance, through supporting safe spaces in schools and campaigns to change behaviour norms relating to early marriage. Campaigns to shift norms relating to child marriage

were shown by this research to have been highly effective in certain communities, as was the impact of marriage norms upon the well-being and aspirations of children – particularly young and adolescent girls for whom marriage was often cited as a reason for withdrawing from education and, hence, the potential that education brings.

- UNICEF should help to highlight, and close, the gap in the livelihoods and resilience discourse relating to child protection. This research emphasised, for instance, that a key determinant of child protection is whether and how a household is able to retain its income and assets. If the household is unable to do so, the impacts can include dissolution of familial unity and implementation of coping strategies (such as migration, child labour, and withdrawal from school) which can severely compromise child well-being in terms of their safety, as well as in terms of social and human capital.
- Strengthen local institutions and capacity for child protection, including capacity in regional, *woreda*, and *kebele* administrations, and community-based mechanisms such as CCCs[107]. The research highlighted the important position these structures have in community organisation and response, yet their ability to mobilise resources and respond is often limited. Specifically, capacity building should encompass a better understanding of child protection concerns, in general, and in particular those that are particularly common to the area in question, with a focus on economic migration and transhumance. The research showed that while such understanding, and referral capabilities, did exist in *woreda* offices of MoWCA, it was highly limited elsewhere. While capacity building should at a minimum involve CCC members and social service departments, it is unlikely that their action alone will be sufficient to respond to all cases. Therefore, broader community sensitisation about what constitutes a child protection concern and why, as well as what can be done, are a critical complement. It is also likely that the existing resources available for responding to child protection violations, at the community level, are inadequate; as such, it would be valuable to compile evidence about the specific resourcing gaps to, feed into broader advocacy and dialogue with MoWCA, border control institutions, and other development partners working not just on child-specific issues but also on human development and humanitarian relief more generally.
- Capacity building and technical assistance should also extend to systems for regular monitoring of child protection issues (including age and prevalence of child marriage, prevalence and type of child labour, separation from caregivers, abuse, abduction, etc.), which should feed into the formulation of needs assessments, as discussed in an earlier recommendation.
- Consider exploring the addition of PSNP criteria that would reflect the likelihood of overall household vulnerability resulting in outcomes that are negative for one or more children; in one respect this would follow from livelihood vulnerability, but it also concerns family size, cultural practices and attitudes, and likely coping strategies in cases of drought.

Design strategies and interventions to build skills, contacts, support networks, and opportunities for youth employment – recognising that sometimes this will involve migration.

Within the wider context and realities of industrialisation and increasing urban migration, support for efforts to strengthen the quality of technical and vocational training is required. Specifically, this training should seek to equip young people with the skills and education that will enable them to secure their livelihoods in the future, and increase their capabilities in migratory contexts where they may not be able to access the benefits of existing social networks. This could include developing non-formal learning opportunities and links with decent employment opportunities. More broadly, there is an opportunity to support the development of core skills at an early age (e.g. primary schools) that help children to understand, cope with, and take advantage of the dynamic socioeconomic context that was exhibited in many research sites. For instance, in those areas where children expressed a desire to pursue professions that were atypical of their household and community, interventions could help them to find information on what their options are, what the requirements are, and what support they can access.

Strengthen the institutional and strategic foundations for a transition towards a child-sensitive DRM paradigm, particularly through building up the capacity of NDRMC.

DRM represents a far more comprehensive approach to dealing with the threats presented by drought than more reactive approaches. Such a shift aligns with resilience as it requires an effort to understand the risk factors that could turn hazards into disasters or emergencies – and encourages an evidence-based approach to designing interventions to reduce

[107] This recommendation is in line with the more specific recommendations in UNICEF, 2015.

those risk factors. Doing so prevents or reduces the scale of disasters and their impacts on human well-being, and also addresses the obstacles that prevent communities and individuals from building greater self-reliance for coping with shocks. This paradigm is highly relevant to child well-being: given the huge impact that shocks can have upon children's development and future opportunities, an emphasis upon risk reduction and risk prevention is likely to be particularly beneficial to them. Also, the emphasis upon risk analysis as a foundation for action provides a suitable first step for an adaptive approach to supporting child well-being that recognises the dynamic and contextually-specific nature of children's actions and aspirations.

In many senses, El Niño-related drought is a phenomenon that is well suited to a DRM approach, as its occurrence and manifestation are predictable, and measures for reducing human and socioeconomic impacts are well known. There is evidence of a paradigm shift at the macro level towards managing risk, compared to managing disasters (as evidenced in the DRM policy and NDRMC), though the challenges involved in such a shift involve overcoming sectoral silos to achieve cross-sectoral coordination and should not be underestimated. Pre-financed emergency preparedness plans are a potentially transformative way of managing shocks. Plans should define who will do what and who will pay for what in the event of a disaster, and govern '*a set of predefined systems that ensures all systems are go*', including clear command and control mechanisms, information and scalable delivery systems[108]. Different types of risk financing instruments (including insurance schemes at macro and micro level) should be considered in relation to the different components of this plan, and incorporated through a 'risk layering' approach – taking into account the child-specific angles of such interventions.[109]

Support mechanisms that build social capital, recognising the importance of social institutions for facilitating households to recover and for children/ youth migrating.

Whilst the findings from the research raise questions about the viability of pastoralist livelihoods over the longer term, it emerged that social capital was an important factor in enabling households to cope/recover, but was considered to be declining. Deterioration of customary/ social institutions was identified to be largely a result of a lack of resources, as well as migration at a community level. Indeed, there is a growing body of evidence on the significance of social capital for building resilience in the wake of natural disasters, including emerging evidence from interventions in Ethiopia to build social capital as a mechanism for prevention and recovery[110]. 'Non-conventional' approaches to, for example, infrastructure development for water management (such as pond building/repair) and community savings and loan schemes that draw from existing local structures/institutions, can both enhance social ties and directly facilitate recovery.

Although, for a generation of children that are increasingly 'urban'/migratory, the relevance of some customary institutions may be diminishing, there are mechanisms that could be explored to support social capital for children 'on the move'. For example, supporting interventions that target youth / children's clubs, and those in which churches and mosques provide opportunities to engage children / youth in associational activities. Identifying and / or establishing opportunities to engage children / young people in urban locations is especially important in the context of increasing urban migration. Engaging children / youth in skills training schemes may also provide an opportunity for building social capital (see recommendation above).

8.2 Future research

The recommendations speak to areas which this study identified as important, but there remain key gaps in knowledge about the condition of children's resilience and the environment for managing risk and vulnerability.

8.2.1 Research areas specific to children's situations in drought

A systematic review of evidence on child migration in the context of persistent drought: trajectories, consequences for well-being, and strategic implications for development partners.

This research underscored the diversity that exists in terms of the trajectories that lead to and from child migration in the context of drought, and also highlighted some of the gender dynamics of migration, the motivations and perspectives of child migrants, and the implications that migration can have for well-being, with external assistance being an important influencing factor. This complements a large body of existing research on the same topic[111]. There is potential value in conducting a systematic review of evidence, with a view to establishing an analytical framework for understanding child migration, understanding whether it is a positive or negative coping strategy given the context, and identifying what types of intervention would be appropriate in different contexts –

[108] Dercon, S. and Clarke (2016) argue that 'credible pre-disaster planning' can improve ownership of risk by governments, helping them to reduce reliance on humanitarian aid (which can be slow and unreliable) and improving the efficacy of disaster response.
[109] United Nations University for Environment and Human Security, 2017.
[110] For example, Shimada, G., and Motomura, M., 2017.
[111] Including research conducted in 2017 by Erulkar, A., Medhin, G., and Negeri, L., 2017.

which may range from preventing migration to ensuring that children are sufficiently protected during and after their journey.

Situation and needs of child migrants in urban areas.

While this would be included in the above research recommendation, it is worth highlighting this as an area that potentially warrants specific attention given a) its relevance to children's situations in drought-affected areas, and b) the lack of specific existing research on the topic. The research would potentially feed directly into recommendations for designing child-focused urban social and economic policy, as well as helping to better understand the prospects and needs of children in drought-affected rural areas who see migration as a coping mechanism.

Impacts of drought upon intra-familial relationships, and strategic implications for development partners

The research revealed that drought, unsurprisingly, had important implications for children's emotional states, and particularly in terms of how they related to their family members. Conflict between parents was mentioned as a key driver of child migration, and stress and worry about family members who migrate or travel long distances was also a salient finding. Understanding how these emotional responses play out and condition children's perspectives and decisions could be a valuable input to programming for child well-being.

The implications of PSNP enrolment for child well-being

While some research on the implications of the PSNP for child well-being has been conducted (most notably by Young Lives, which has informed policy changes)[112], there remain some important questions to explore. For instance, with the recently adopted provision in the Programme Implementing Manual for PSNP IV, which excludes children under the age of 18 from participating in the public works, there is an important question regarding how rigorous efforts to prevent child labour on PSNP public works programmes are, and whether such instances of labour increase in drought periods given greater responsibilities of other household members. Also, it is important to explore and raise awareness of provisions introduced with PSNP IV that allow households with malnourished children to become transitory direct beneficiaries: currently, those provisions are not widely known or understood[113]. In the context of the findings from this study, in terms of impacts on children, another aspect of the PSNP that it would be valuable to explore is the relationship between the PSNP, marriage, and education, and how interventions may vary in humanitarian and development contexts.

8.2.2 Research areas related to disaster response/management more broadly

Strategic review of synergies and contradictions in high-level strategies and programmes for DRM, poverty reduction, food security, and economic development

Undertake a review which looks closely at the ways in which different priority areas come into conflict, and the implications of interventions being prioritised, to build an evidence base for what trade-offs there will be when implementing different strategies and how implementation can better take these into account in building resilience. For example, whilst irrigation interventions might benefit agricultural communities, they will drain water away from other areas/users; similarly, the move towards industrialisation (and energy expansion) will have impacts on climate, as well as on land. Understanding the contradictions – as much as the synergies – will support consideration of how to implement interventions that reinforce each other.

Comparative analysis of woredas that have reduced their vulnerability to drought over time, and those that have not (e.g. those that are persistently ranked as Priority 1)

Comparative analysis could help to highlight those features of a society or administrative area that are conducive to resilience building and those that are not, which may not be so clear without a comparative perspective. The analysis could adopt a more particular focus, such as livelihoods, social capital, external assistance, and/or policy context.

[112] Young Lives, 2008.
[113] UNICEF, 2017.

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Annex A Research methodology

This annex provides more detailed information regarding the research methodology and approach, including an overview of the components of the methodological approach adopted to respond to the research questions, a summary of the geographical sampling protocol and respondent selection, and an outline of challenges/limitations.

The approach was guided by different 'layers' of questioning – at key informant/community level, household level, and individual within household level – as well as by secondary data and a literature review.

A.1 Secondary data

Literature review. Drawing on peer-reviewed academic journal articles and 'grey literature', review of secondary literature explored: the manifestation and dynamics of El Niño, climate change and drought; identifying and understanding drought impacts and coping strategies; livelihoods and vulnerability; and household dynamics and well-being, with a particular focus on children. This review informed the identification of key research areas, concepts, and debates, based on analysis of events beyond the 2015-16 El Niño event, and understanding of the dynamics and early impacts of the 2015-16 El Niño event. Relevant evidence from the review is incorporated into the discussion on context and against the research questions.[114]

Secondary data review and analysis. Based on data availability at the time of the study, the research team undertook a review and analysis of data from the LSMS—ESS, Wave 2 (2013–14) and Wave 3 (2015–16). The LSMS provided a technically sound and accurate measurement of indicators, representative at national level as well as for four of the study regions (Amhara, Oromia, SNNPR, and Tigray) (though not representative at *woreda* level). Furthermore, it provided data for households both 'pre-' and 'post-' the 2015–16 El Niño drought, allowing for analysis across a set of relevant indicators. This included analysis against factors of interest, including consumption and food security, WASH, education, health, time use, savings and credit, agriculture and livestock, and shocks and coping strategies. The analysis was aimed at identifying and indicating any association (rather than making causal claims) between changes in the key indicators of interest, and the occurrence of the El Niño event in 2015–16. Discussion in response to the research questions takes account of the trends emerging form this analysis.[115]

Policy and programme mapping. A mapping and review of existing policies and programmes was undertaken. This focused on policies and interventions aimed at supporting drought-affected regions and minimising the long-term effects of similar natural events on children's and households' well-being. This included policies and programmes related to DRM (livelihoods), those targeted specifically at children, as well as those more broadly aimed at the provision of social protection and poverty reduction. The programme mapping involved the collation of documents, as well as drawing on interviews, in relevant sectors and across stakeholders (government, NGO, the UN, and other development partners). This is incorporated into the context section and discussion of the humanitarian response.

A.2 Primary data collection

A.2.1 Geographical sampling: *woredas* and *kebeles*

***Woreda* selection:** *Woredas* were purposively selected in each of the five regions in a two-stage process against criteria that reflected characteristics of interest to the research. 'Vulnerable' woredas were prioritised[116]. Vulnerability is a multifaceted phenomenon, the parameters of which include the stress that a system is exposed to, its sensitivity, and its adaptive capacity.

- In **Stage 1**, *woredas* were selected for their vulnerability to the 2015/16 El Niño drought, based on the application of hotspot classifications[117] over three time periods, during and subsequent to the event[118]. The selected time periods (December 2015, March 2016, and December 2016) reflected

[114] A Contextual Analysis was submitted as a standalone volume, alongside the Inception Report (OPM, 2017a).
[115] A Quantitative Assessment was submitted to UNICEF as a separate volume, alongside the Inception Report (OPM and HESPI, 2017c).
[116] Here, vulnerability was taken to refer to the degree to which (and the characteristics which explain why) a social-ecological system is susceptible to, and is unable to cope with, adverse effects (Adger, W. N., 2006; Wisner, B., Blaikie, P., Cannon, T., Davis, I., 2004).
[117] The classification of hotspots is based on a framework, developed by the DRM and Food Security Sector within the Ministry of Agriculture, and now within the NDRMC. A hotspot is defined as 'an area or population affected by any undesirable events or situations that have an immediate or in the near future direct bearing on food, livelihood and nutrition security and require immediate attention or intervention…' (EWRD, 2014). The severity level is either 1 (very severe), 2 (severe), or 3 (moderate). The hotspot classification uses seven multi-sector indicators (health and nutrition, agriculture, market, education, water and sanitation, and others – including migration, livelihoods disruption, social institution disruption etc.), making it an appropriate framework for considering vulnerability. The hotspot classification is revised every quarter, providing a 'snapshot' of vulnerability in time.
[118] The May 2015 hotspot assessment is not included, given how close it was to the initiation of the El Niño event and because although it may reflect the early effects of the El Niño in areas of the country that rely on spring rains, the kiremt rains are more significant to a large proportion of the rural population. At the time of sampling, the December 2016 hotspot classifications were the latest data available.

the immediate impacts of the failed rains and subsequent vulnerability throughout 2016 to take account of the 'longer-term' impacted areas. This acknowledges that factors influencing vulnerability and hotspot assessment indicators go beyond the El Niño event itself (e.g. La Niña-related flooding, the Indian Diapole-induced drought, and non-weather-related shocks, such as collapses in markets), factors which were considered through the research itself but which were not possible to assess at the sampling stage.

- In **Stage 2**, additional information (such as agro-ecological/livelihood zone, proximity to a town/or a major road, PSNP coverage) was considered for those *woredas* that were identified as meeting the 'vulnerability' criteria based on hotspot classifications in each of the five regions[119]. The selected *woredas* reflect diversity across livelihoods bases, since livelihood is a key factor for rural households in explaining *why* and *how* they are vulnerable to drought – and, in Ethiopia, production systems are closely linked to socio-cultural systems. Sites were selected to reflect diversity across characteristics of interest in determining the impacts of the drought on vulnerable households and children's well-being.

A short summary of the characteristics of the 10 identified *woredas* is presented in Annex B.

Selection of *kebeles*. A consistent purposive sampling approach to the selection of *kebeles* was applied, based on an overarching characteristic of 'vulnerability' – but considering areas that were 'worst affected' by the El Niño-induced drought specifically. The research team conducted meetings with *woreda* officials and administration staff on the first day of fieldwork to consider factors affecting *kebeles* (e.g. rainfall shortage, production losses, livestock deaths, exposure to recurrent drought), as well as proximity to urban centre/road access, degree of in-/out-migration, and receipt of external assistance. Selections reflected contextual contrast: for example, in Tigray, one lowland agro-pastoralist *kebele*, one highland agro-pastoralist *kebele*; in Amhara, one remote *kebele*, one more connected *kebele*. Furthermore, specific factors were points of interest in locations: for example, in Amhara Sivilkay (Guba Lafto) high rates of malnutrition were reported; in Oromia Faji Gole (Shashamene Zuria) child migration/labour were reported; in Tigray Adishum Bereket (Ofla) irrigation coverage was significant, but had been significantly affected by the drought/ subsequent flooding.

A.2.2 Selection of respondents

In the selected *kebeles*, respondents were selected for FGDs and HHCSs. Key informants at *woreda* and *kebele* level were purposively selected for interviews. Selection followed a three-stage process:

- In **Stage 1,** adult respondents were identified from amongst the 'most vulnerable' and 'poorest' households to take part in the FGDs, based on site-specific official data or local knowledge. Wealth status and/or participation in the PSNP was used as a proxy indicator for vulnerability and poverty.[120]
- In **Stage 2,** additional criteria were applied to capture the diversity of experiences across households and children within households. This included considering household status (e.g. female-headed, male-headed and child-headed households), household size and number of dependents, as well as other factors (e.g. presence of a pregnant or lactating woman, infants, adolescent girls, or disabled children within the household).
- In **Stage 3**, child respondents were selected from amongst the adults (those who are parents/ caregivers). This involved identifying adults who had children within the household aged 7–12 and 13–18[121]. Furthermore, the HHCSs were selected from amongst the adult/emancipated minor FGD participants, keeping in mind – across *kebeles* and regions – factors detailed in Stage 2 to ensure diversity of household compositions.

A summary of selected household profiles is presented in Annex C (with full write-ups of five households in Section 6).

[119] In Afar, there were 21; in Amhara 13; in Oromia 20; in SNNPR six; and in Tigray seven.

[120] Whilst the multi-dimensional nature of vulnerability/poverty is acknowledged, wealth encompasses other factors of vulnerability/poverty and at the same time – along with PSNP data – is the criteria against which there is more 'standardised' data or 'knowledge'.

[121] Both the upper and lower age limits were determined with the research questions and methodology in mind, whilst appreciating the different experiences (and evolving capacities) of children within the age range 0–18. The lower limit was based on the fact that seven-year-olds would have been four or five years old at the time of the drought.

A.2.3 Primary research methods

The research activities conducted in each *kebele*/*woreda* are summarised in Box 31 below.

Box 31 Summary of research activities conducted in each site

- KIIs with *woreda* government staff
- KIIs at *kebele* level / other
- FGD with community leaders
- FGD with adult males
- FGD with adult females
- FGD with older boys (13–18 years)
- FGD with older girls (13–18 years)
- FGD with younger children (7–12 years)
- HHCS – observation
- HHCS – husband and wife interview
- HHCS – older child interview (13–18 years)
- HHCS – younger child interview (7–12 years)

FGDs

FGDs undertaken with adults explored livelihoods characteristics, impacts of the El Niño drought on children's well-being, and, more widely, household and community dynamics (especially related to livelihoods, coping strategies etc.). FGDs with children focused on understanding children's perspectives of the drought's impacts on their lives – both in the immediate and in the longer term, with questions structured around themes related to well-being, including material as well as affective considerations.

HHCSs

HHCSs, conducted with multiple members of the household (adults and children), provided insights into the role of intra-household social dynamics in mediating El Niño's impacts on children. Information on nutrition, educational attainments, health conditions, child labour patterns, and coping strategies was captured – as well as household status information (such as income/expenditure/financial position, receipt of external support) and coping strategies (migration, education, consumption).

Participatory approaches

Participatory tools were used during FGDs with adults (livelihoods matrices and risk/reliability ratings with adults) and children (body mapping, balloons and stones) to guide questioning around concepts of well-being and drought impacts, and how this related to livelihoods (see Table 6 below). In all *kebeles*, a community timeline mapping was conducted, providing a broad picture of changes over recent years and forming a reference point for subsequent discussions and interviews.

Table 6 Participatory methods utilised in FGDs and HHCSs (adults and children)

Tool	Research activity/ies	Explanation and comments
Adults		
Livelihoods matrix analysis	Adult FGDs	Mapping of livelihoods by distributing a pile of beans among activities and ranking their risk and reliability on a scale. Enabled analysis of the impact of the drought on livelihood options and results, and the effects on local economy.
Community timeline mapping	Community members FGDs	Mapping a community timeline around major events within the life of the community, encompassing shocks/disasters, infrastructure developments, weather patterns, etc. Anchoring for subsequent discussions in relation to time-specific event of El Niño.
Children		
Balloon and stones	Children 7–12 HHCS and children 13–18 FGDs	Exploration of characteristics of well-being and ill-being, including how different factors are experienced and their relative importance in children's lives.
Body mapping	Children (7–12 FGDs)	Exploration of characteristics of well-being and ill-being, including how these are experienced physically/emotionally, as well as of the possible causes and what/how support is/could be provided to overcome difficulties (e.g. interventions, individuals).
Life course timeline	Children 13–18 HHCSs	Exploration of past, current, and future life situation and events which have shaped experiences of well-being (and ill-being). Brings a temporal dimension, and considers events that have impacted on well-being and how their well-being might be impacted in future.

Figure 4 Body mapping exercise, Amhara – Guba Lafto, Sivilkay

KIIs

Semi-structured interviews were conducted at national, regional, *woreda* and *kebele* level, providing valuable information on the broader context of impacts, as well as on interventions/external assistance and wider dynamics surrounding the El Niño and other development patterns. Annex D provides a summary of all persons met and consulted during the research.

A.3 Challenges and limitations

There were no significant challenges encountered to the extent that they affected or delayed the planned research activities. However, site-specific considerations were managed by the research teams – which were largely logistical (e.g. floods in Ofla (Tigray) affecting accessibility to the *kebele*) or related to the availability of respondents (including as part of the Ashenda festival in Tigray). Challenges were mitigated by retaining a flexible schedule and scheduling meetings to coincide with community availability (e.g. conducting interviews with girls early in the morning during the Ashenda, to allow them to proceed to their responsibilities/celebratory activities). The overall timing of the field work coincided with school closures. Although this meant that some teachers were unavailable for interview (e.g. in Haro Kersa (Oromia)), it had the benefit that it was easy to arrange focus groups and interviews without affecting children's school schedules. Time requirements were outlined early in the process, in order to determine an appropriate time for activities based on selected respondents' availability.

Other challenges related to community expectations about the research activities. This was especially apparent in Oromia and SNNPR, where there was a perception that the research team were providers of aid. Discussion with and engagement of local representatives to explain the purpose of the study mitigated these challenges. Furthermore, in the case of Afar, the research team identified that the adult members of the community were prone to exaggeration of losses of livestock and impacts of the drought. The research design allowed the teams to triangulate statements, and cross-reference between the adult and children, both in FGDs and within HHCSs. More specifically, protests in Oromia meant that the research team were asked by *woreda* officials to complete field work ahead of schedule on the grounds of security concerns. Despite this, the team were able to complete all planned research activities by distributing activities across the team.

A general challenge/limitation across locations (although to varying degrees) was respondent engagement, especially amongst children's groups. For example, in Gurwure (Tigray), children across age groups and genders were extremely reserved. However, research methods – and use of participatory tools – were designed to engage children, retain focus, and facilitate discussion—meaning teams were able to engage with them effectively.

A.4 Data handling and analysis

Responses during KIIs, HHCSs, and FGDs were captured in two forms: digital recordings and detailed notes. Notes taken against a template provided in a Fieldwork Manual enabled points to be organised around research questions and sub-themes. Notes were subsequently transcribed by: (a) typing the notes into a Microsoft Word document; (b) fleshing out and validating the notes using digital recordings; (c) translating all notes into English; and (d) anonymising the file name.

Analysis began in the field, with team members discussing their detailed notes during daily debriefs and populating 'master templates' of key findings against the four main research questions. This provided a first round of assimilation, validation, and triangulation, as well as forming the basis for development of a code list. Transcribed data were systematically coded following a 'grounded theory' approach using NVivo software, against a thematically organised coding framework. NVivo analytical architecture was structured to reflect the overall analytical framework, defining 'cases' for households and FGDs, and ensuring that the code list systematically isolated data linked to each dimension of the well-being framework.

Annex B
Woreda and *kebele* profiles

B.1 *Woreda* profiles

Tigray 1: Tanqua Abergele, Central Zone: Tanqua Abergele is an agro-pastoral area in the *Tekeze* livelihood zone, a dry, lowland area surrounded by mountains, with the Tekeze River running through it. Agricultural production is entirely dependent on *kiremt* rainfall, though the area is used to erratic rainfall cycles. Production is mixed, including sorghum, maize, *teff*, and sesame, and produced using plough agriculture. Declining soil fertility is an important factor influencing livelihood decisions. The *woreda* receives cash and food assistance from the PSNP. Livestock are an important source of food and income. PSNP coverage was initiated in 2004, providing food and cash assistance.

Tigray 2: Ofla, South Zone: Ofla is a mountainous area with undulating hills and valleys, and fertile clay soils. Livelihood systems are agro-pastoral, relying on *belg* and *kiremt* rains for the cultivation of a variety of crop types, and with livestock providing a major source of income. The main highway from Mekelle to Addis is accessible to the area. The *woreda* has received cash and food assistance from the PSNP since 2004.

Amhara 1: Guba Lafto, North Wollo: Guba Lafto is a highland area characterised by a plough-based agricultural livelihood system, which has been subject to cycles of drought, severe deforestation, and other environmental dynamics over many decades. The *woreda* is experiencing rapid population growth. Weldiya town, the capital of North Wollo, is located in an enclave of Guba Lafto. The *woreda* receives cash assistance from the PSNP and has a long history of humanitarian interventions through NGOs and other channels.

Amhara 2: Ebenat, South Gonder: Ebenet has varied topography, including mountains and plain land, and comprises three agro-climatic zones. Agriculture relies on *kiremt* rains only, though these are typically erratic. Major crops are *teff*, wheat, sorghum, peas, and beans. Land degradation is a major problem that inhibits agricultural production, along with vulnerability to weather shocks including drought. The major urban area in the *woreda* is Ebenat town. The *woreda* receives cash assistance from the PSNP.

Oromia 1: Fentale, East Shewa: Fentale is a pastoralist area in the Great Rift Valley which has been subject to recurrent drought. Pastoralism is complemented by a variety of non-pastoral activities, such as agriculture, labour, fuel wood collection, and charcoal selling, to increase household income. The *woreda* receives food assistance from the PSNP.

Oromia 2: Shashemene Zuria, West Arsi: Shashemene Zuria is an agricultural area that is productive in good seasons, producing legumes, roots, and grains. However, the area has consistently been affected by droughts, waves of population pressure, and water scarcity. It is close to one of the busiest urban areas in Oromia (Shashemene), which is expanding, and is relatively close to the capital of SNNPR, which has opportunities for seasonal workers. The *woreda* was not covered by the PSNP in 2015.

SNNPR 1: Mirab Abaya, Gamo Gofa: Mirab Abaya is a lowland agricultural area that was affected by poor *kiremt* rains in 2016 and 2015, linked to the Indian Ocean diapole. The livelihood system is typical of SNNPR (and hence different from other areas), being characterised by hand-hoeing and complex intercropping. The main crops grown are maize, roots, and banana. The *woreda* is topographically diverse, with cooler mountainous elevations and tropical warmer lowland areas around Lake Abaya. Infrastructure, mainly roads, has improved in recent decades, which has connected communities to markets. Influences on socio-cultural practices include the presence of evangelical churches, which often have strong development and/or humanitarian activities. The *woreda* receives cash assistance from the PSNP.

SNNPR 2: Boricha, Sidama: Boricha is an agro-pastoral lowland area, that also suffered from late and erratic *belg* rains and poor *kiremt* rains in 2016. The *woreda* is in one of the most densely populated areas of Ethiopia and has long been a hotspot for food insecurity. Out-migration is common, to Ethiopia and further afield, and remittances play an important role in household economies. The *woreda* is covered by food and cash assistance from the PSNP.

Afar 1: Megale, Zone 2: Megale is a pastoral lowland area in southern Afar, whose pastoralist population lost substantial amounts of livestock assets as a result of the El Niño event, and then were badly affected by flash flooding in late March–April 2016 due to torrential rain in neighbouring highland areas. The region is drier and hotter than the Dulecha, with a supply chain linked to Tigray. Megale receives PSNP food assistance.

Afar 2: Dulecha, Zone 3: Dulecha is a pastoral area that receives food assistance from the PSNP. Pastoralists in this area were highly food insecure prior to the 2015-16 El Niño event. However, with improved rains in 2016 they were projected to be marginally food secure for the period October 2016–May 2017 according to FEWSNET. Megale and Dulecha *woreda*s are inhabited by two different major clan lineages. The presence of NGOs and donors is more long-standing in this southern part,

compared to Zone 2. However, the *woredas* are both experiencing significant changes to their pastoralist systems, to which drought is an important contributing factor. In addition, irrigation systems along the Awash River have impacted upon settlement patterns and pastureland availability in both *woredas*.

B.2 Selected *kebele* summary profiles

The paragraphs below provide summary overviews of the selected *kebeles* – detailing key characteristics in terms of livelihood base, location and linkages, and presence of basic services (e.g. schools, health centres).

Amhara

Ebenat: Burkoch

Burkoch *kebele* lies some 43 km from Ebenat *woreda* town. The *kebele*'s population of 4,350 is predominantly Christian Orthodox. Burkoch is linked to the town and other villages by a winding unsurfaced road through hilly terrain. The *kebele* is principally agro-pastoralist, although some families also benefit from remittances sent by family members who have migrated to work in larger towns, settlements, or zones of commercial agriculture. The main cultivars include sesame, *teff*, mung beans (*masho*), and haricot beans, all of which are grown as cash crops. Maize and sorghum are also cultivated, but these are mainly grown for home consumption, along with kitchen garden crops (leafy greens and vegetables). Livestock holdings in the community include goats, sheep, and cattle. Market access is quite good, the nearest one being Kualisa, some 7 km away—a journey usually made on foot. The Ebenat *woreda* town of course hosts a larger market but it is more difficult and expensive to reach this, particularly when transporting goods. Water for both domestic and livestock use is obtained (in non-drought periods) from rivers, boreholes, and a dam. Under draught conditions, water shortages become very severe and residents depend on trucked-in water supplies. The 2015–16 El Niño drought was characterised by the early cessation of rain and the subsequent failure of the entire crop sown in July (at the beginning of the rainy season): famers were unable to use even the remnants of the crop as cattle fodder, it simply '*scorched and vanished*'. The PSNP programme operates in Burkoch, and many households benefit from both direct and indirect support schemes. ACSI works in concert with the PSNP, but also provides commercial loans to farmers.

Burkoch has one primary school, providing education from Grades 1 to 8. To access secondary education, children must travel further afield to Kualisa or the *woreda* town. During the drought, keeping the Burkoch School staffed was especially challenging, particularly given that drop-outs and absenteeism rose during this period. The *kebele* also includes a very basic health post staffed by two Health Extension Workers. The physical infrastructure of the health post is poor, consisting of a single mud building which serves as consulting room and office. There are very limited facilities for in-patient care. The Health Extension Workers offer basic primary care for community members, including provision of simple medicines, such as antibiotics and analgesics, treatment of acute diarrhoea with oral rehydration salts and zinc, diagnosis and treatment of malnutrition through anthropometric techniques, and pre-natal care.

Community leaders identified four wealth rank categories in Burkoch. A person is considered wealthy if he owns a firearm not issued by the government, a mule for transportation, three or more pairs of oxen for ploughing, and a house roofed in corrugated iron. The second wealth rank identified by these informants would include an owner of two pairs of oxen who is able to save a stock of grain in two or more outdoor storage silos called *sherfa*. Finally, the community includes poor and very poor families, characterised by few or no assets, a single ox or no oxen at all, and very limited access to agricultural land.

Figure 5 Case study house, Amhara, Ebenat, Burkoch

Guba Lafto: Sivilkay

The *kebele* of Sivilkay is located approximately 25 km from the Guba Lafto *woreda* town at Woldiya. The population of 2,489 people is almost completely Muslim. The *kebele* benefits from a good road connection with both the town of Woldiya and with the nearer market town of Hara. The tarmacked road which leads from the entrance to the *kebele* to Hara and Woldiya is busy, being a main trucking route to Djibouti and its sea ports. The nearest market town is Hara, which is relatively easy to access along the good road leading to Woldiya. Every Thursday, a large market is held in Hara and farmers buy and sell goods and livestock. Sivilkay is an agro-pastoralist community, where the main cultivars are sorghum and *teff*. Both of these are sold in the market, as well as retained for

home consumption; *teff* commands a far higher price than sorghum. To a lesser extent, chickpeas and maize are also cultivated. Better-off farmers also keep goats and camels, although they rarely kill camels for food because they are very expensive, and it is better to keep them alive for transportation of goods and water. Camels are procured from the pastoralist population of the neighbouring Afar region. Prior to the 2015–16 drought, cattle were also kept, but many died from the acute water shortages. Even now, pastureland is poor and the remaining cattle provide little milk. In addition to farming and livestock, many families in Sivilkay benefit from remittances sent by family members who have migrated away to work in Saudi Arabia. However, the remittance sector is said to be shrinking: recent migrants to Saudi Arabia complain that obtaining work has become more difficult there as there is less demand for unskilled labour than there was in the past, and deportation has become common. Even so, the remittance economy is noticeable in the community, which possesses a mosque and many houses constructed from cement, brick, metal, and other high-quality building materials. In addition to their use in construction, remittances are also important for cultural life, and are often used to fund lavish traditional feasts called *sedeka*.

Water for household use in Sivilkay is obtained from boreholes and water points in the community (agriculture is rain-dependent). These dried up in the 2015–16 El Niño drought, which was manifested at first by the late arrival of the April rains—these arrived on August 10. The drought hit the *kebele* hard, and in particular resulted in livestock deaths or unprofitable destocking, especially among poorer farmers who lacked the financial resources to buy commercial feed. Crops sown in April failed during the drought, and the damaged harvest was fed to cattle. According to local informants, the *kebele* depended on external support for nine months. This support came from both the government and from civil society: the community benefits from the PSNP, while civil society relief efforts were led by Save the Children and WFP. Within the community itself, poorer households benefited from the *zeka* system, organised by Muslim religious leaders and elders. This enjoins wealthier households to contribute two or three kilograms of grain to poorer families at the end of Ramadan.

Sivilkay is served by a Health Extension Worker who runs a small health post provided primary care and, in particular, nutrition assessment and IMAM. According to the Health Extension Worker, acute malnutrition was a serious problem during and after the drought, and she was forced to send more severe cases to the larger health post at Hara. Figures for acute malnutrition have now dropped, and the Health Extension Worker attributes this to external support rather than livelihood recovery. The *kebele* also has a solidly-built school providing both primary and secondary education.

Oromia

Fentale: Haro Kersa

Haro Kersa is a pastoralist community which borders both Amhara and Afar. It is around 16 km from the *woreda* town of Metehara. The inhabitants of the *kebele* are members of a single clan. They are Muslim and polygamy is common. Their source of income is selling live animals – camels, cattle, goats, and sheep. While some attempts at subsistence agriculture are reported, this is very small-scale and challenging in the face of a very arid environment. Wealth in the community is defined by the size of livestock herds, and the balance of those herds, where camels are worth the most and sheep the least. This ranking is also reflected in who takes care of animals: only men and older boys are allowed to look after camels, whereas the job of caring for sheep and goats is for small children (as young as five). The role of children in caring for livestock has a strong cultural and economic grounding – and is a key reason why some children do not attend school as they are expected to fulfil these familial obligations. The community migrates on an annual basis during the dry season to find pasture for livestock. This brings them into direct conflict with neighbouring tribes and communities – the risk of fighting (gunfire, livestock raids) is very high, on their seasonal migration route, especially as resources are scarcer in the context of ecological and climatic change, and demographic pressure.

There is a health post in the community, which provides vaccinations and limited other care, and a health centre about 10 km away. There is a road connecting the *kebele* to the main road to Metehara, but it is very badly damaged, as a result of heavy trucks and floods. A power line and water pipe were constructed by the government but neither are functional; there is no irrigation. In the dry season, when the pond in the *kebele* dries up, women spend 11 hours walking to and from the Bulga River to fetch water. There is a primary school in the *kebele*. More girls than boys attend school – one reason suggested for this is that boys prefer to migrate with their families whereas girls do not mind staying by themselves at home during the dry season, allowing them to continue attending school. After Grade 8, pupils need to rent a room in Metehara – which their families often cannot afford. Out-migration, beyond seasonal migration with the entire community, is a cultural taboo – children are expected to stay in the community throughout their lifetime. Drought is having a significant impact on the well-being of the community, including children – indeed, it challenges their entire way of life, as livestock herds diminish as a result of deaths from starvation and dehydration,

and sales to earn income to purchase food to replace the decline in milk-based products. The latter decline has nutritional impacts upon community members, especially children. Diminishing water resources in the community cause them to travel further to find water and pasture, with opportunity costs for families' (and children's) time, and creating risks associated with encroaching on land occupied by other communities. Community members loan money among one another but do not engage with formal financial institutions (as far as the research indicated). The PSNP does operate in the community and various types of aid (including food, water, livestock feed, nutrition) have been provided by GOE and NGO partners on a regular basis in recent years.

Shashemene Zuria: Faji Gole

Faji Gole is located approximately 10 km from an urban centre, Shashemene Zuria. The *kebele* has electric power and water piping. The inhabitants of the *kebele* are traditionally agriculturalists – they own small plots of land, upon which they used to farm maize (exclusively), but in the last 10 years have diversified into *teff* and haricot beans, anticipating a higher sales value and greater resilience to drought. These products can be taken to Shashemene Zuria on a cart and sold at the market day there, which happens three times per week. Drought has been a regular, and worsening, feature of life for the past seven or so years. The community is used to biannual rainfalls – but in recent years the rain has failed in at least one season, and often (as in the El Niño year) two. Families have few other assets – they may have small plots of land, but they have sold any livestock that they used to own, mainly to raise funds to purchase agricultural inputs (for harvests which then fail).

Indebtedness appears to be a serious issue: men have taken out loans with formal financial institutions in Shashemene Zuria, used the money to purchase agricultural inputs (seeds, fertiliser), and then are unable to repay the loan when the crops fail. As agriculture declines, wage labour opportunities have become more common – particularly related to working on large agricultural plots in more fertile (typically irrigated) areas nearer Shashemene and other areas in the *woreda* (or outside, in Oromia and SNNPR). All family members participate in agricultural waged labour. Men are sometimes occupied in trades or services in the town – typically on construction sites. Children are widely engaged in waged labour. Older boys travel to Shashemene to work a variety of jobs: grinding coffee, helping in kitchens, transporting goods around the bus station. Younger boys help on agricultural land and take up other waged opportunities in the *kebele*, such as renting bicycles. Girls may travel to urban areas to work as maids in houses, through arrangements facilitated by their relatives. Typically, they stay for three to five months. By contrast, older boys may stay away much longer. Out-migration is very common, to urban areas in the *kebele*, the region, or to other countries, particularly to South Africa or the United Arab Emirates. There are many cases of children moving to live in Shashemene, often on the street – this appears to be driven by their own decision and frustration with their family's inability to provide for them, and increasing conflict between their parents, driven by lack of resources. There is a school in the *kebele*, but from the interview data, it is clear that drop-out rates and non-attendance are very high. School classes occur in half-day shifts, so some children attend school for part of the day, while working for the other part of the day. There is frustration that even Grade 12 graduates are unable to find jobs. There is a high dependence on food aid – consumption is generally very low and nutrition extremely poor, with some families relying on a form of grass as a main foodstuff following a failed harvest. There is a sense of anger and desperation among adults and children in the community, with aspirations increasingly located outside of the *kebele*.

Tigray

Tanqua Abergele: Gurwure

Gurwure is an agro-pastoral, lowland community located around 14 km from the market town and *woreda* town of Yechila. Agriculture is predominantly rain-fed, although there is a small area of irrigated land (approximately four hectares in total). The main crops produced (in order) are sorghum, maize, *teff*, beans (haricot), and in some cases sesame, with people growing tomatoes, peppers, onions, and other vegetables on the irrigated land. Irrigation started in 2015/16, with the infrastructure provision undertaken by the government. Whilst the majority of households keep goats and sheep, there are households with cattle, oxen, and donkeys. It is very rare for people to keep mules/horses. In a limited number of cases, people keep beehives and use honey production as an additional source of income. The crops – especially sorghum and maize – are being affected by a pest (Stalk Borer), which community members anticipate will affect production this harvest (2016/17) and which was first observed in the rainy season of 2013/14.

There is road access to the *kebele*, branching off the main road (RR30) from Yechila to Tekeze River, which was constructed by the community in 2008/09. The main mode of transport to the market is by foot. However, in 2009/10, people started using animals and vehicles to reach the market. This has enabled people to transport products for sale as well as to access agricultural inputs, such as fertilisers. It has also enabled the construction of water points in the *kebele* (facilitating access for the drilling machines in 20015/16) and opened up access

for veterinary personnel to come to the community. There is no electricity in the *kebele* but there is a mobile network and 3G access in certain locations, including at the *kebele* centre. There is a health post in the *kebele* centre, built in 2014/15, which provides a number of different services, including vaccinations for children and infants, pre-natal and post-natal services, family planning, and MUAC screening of children under the age of five. The school in the *kebele* centre was established as a satellite school in 2002/03, covering Grades 1–4; it was upgraded to a complete elementary school in 2009/10, covering Grades 1–8. There is another primary elementary school (for Grades 1–4) located in Guriba and a satellite school in Buka. On average, students at the complete elementary school travel about half an hour (one way) from their homes to reach the school.

Ofla: Adishum Bereket

Adishum Bereket is a mixed farming (agriculture and livestock) *kebele*, located approximately 18 km from the *woreda* town of Korem. Although people rely mostly on rain-fed agriculture, there is significant irrigation in the *kebele*. Irrigation was expanded in 2014 following the construction of a diversion scheme and concrete canal by the bureau for water resources. The area covered was increased from approximately 6 hectares to 20 hectares, with an expansion in the number of households benefiting. Although not all households benefit, most have some access to irrigated land – with small plots being distributed across the *kebele* (10 x 10 metres). The main crops produced on irrigated land are green peppers, as well as maize, tomatoes, cabbage, and various trees (including avocado). In the summer, wheat, barley, and *teff* are the main crops grown on non-irrigated land, along with some sorghum and maize, as well as pulses (chick peas and lentils). Alongside agriculture, households keep sheep / goats, as well as oxen and cattle (but this is more limited). There are a few cases of households with exotic chickens and three to four households who keep exotic cows. There is free grazing, except for during the summer time, when grazing land is protected.

A road stretching from the *kebele* to the main road (approximately 12 km in length) was constructed in 2013, prior to which community members used to travel by foot and on the backs of animals. Although impassable during periods of heavy rain (due to flash flooding and landslides blocking the way), the road has made it possible for ambulances to access the community. However, people still mainly travel to the market in Korem by foot given that buses to the market are limited due to the difficulty of passing on the road. Due to the population size and the dispersed nature of the population across the area, there are two health posts in the *kebele*. In each health post there are two Health Extension Workers, as well as a nurse in the Adishum Bereket health post. There are two complete elementary schools (Grades 1–8) and two primary elementary schools (Grades 1–4) in the *kebele*. A satellite school was also built in 2016/17 in order to facilitate greater access to education for children across the *kebele*. Children proceeding past Grade 8 go to Ofla (the *woreda* town) or Sesala (a neighbouring *kebele*).

Afar

Dulecha: Tirtira

Tirtira is a pastoralist community. Keeping livestock is the main source of livelihood, with goats, sheep, cattle, and camels being the main types of animals that the pastoralist communities keep. All animals are indigenous. There are no exotic animals and poultry is not known in the area. Grazing is communal and, as pastoralist communities, they move from place to place within the *kebele* in search of pasture for their animals. Although limited, in certain pockets or sub-villages, rain-fed agriculture is also practised. The community mainly grow maize, sorghum and *Masho* (a family of beans). The area is subject to repeated drought, but the 2015–16 drought was significant in that it affected the *kebele* for two consecutive years, resulting in significant reductions in the number of livestock due to lack of feed. There was also a disease outbreak – with animals affected by locally-termed diseases, *Gublo*, *Korboda*, and *Alieba* – affecting the skin, feet and mouths and ultimately leading to death in the absence of treatment. The *kebele* has received good rainfall in the recent rainy season and has been able to grow pasture for grazing. However, there was a sense that the decrease in livestock ownership (particularly camels and cattle) would be hard to recover on account of raised market prices.

At the *kebele* centre, there are some facilities. There is an all-weather road that connects the *kebele* centre to the *woreda* centre but it is in a bad condition. Although the community consider that the road has brought benefits to the community, including the ability for households to access casual labour opportunities in other areas, as well as facilitating market access, it has also contributed to livestock losses as a result of accidents. Moreover, there are no public transportation facilities along the road. The only market for the *kebele* is the *woreda* centre. The communities travel on foot to reach the market. The time it takes to reach the market on foot differs depending on the sub-village: for some sub-villages, it takes five to six hours.

There is one complete elementary school (Grades 1–8), two alternative schools (Grades 1–4), and one satellite school (Grades 1–4) in the *kebele*. The alternative and satellite schools are believed to feed the complete

elementary school. However, in practice, because of the long distance, many who complete Grade 4 in the alternative or elementary school do not pursue their education. There is one health post in the *kebele*, with two Health Extension Workers and one nurse providing health facilities. The health centre was constructed in 2013 and assists the community to receive vaccinations and essential support services/medicines. The culture follows the practice of *absuma* (a marriage practice described as being an arrangement to marry a girl to the son of her uncle from an early age). In this community, whilst the decision regarding marriage is made from a very early age, girls can be married upwards of the age of 10.

Figure 6 Mobile house made of wood and covered by plastic roof and grass wall, Afar, Dulecha, Tirtira

Megale: Addu

Addu is one of the eight *kebele*s in Megale *woreda*. The communities in the *kebele* are pastoralists who depend on their animals for their livelihood. The major animals the communities keep include goats, sheep, and camels. To a limited extent they also keep cattle. In the earlier days, cattle used to be one of the important animals but over time, due to repeated droughts and lack of animal feed, their importance has declined significantly. Today, few households keep cattle, and only in limited numbers. There are no exotic animal breeds in the area. The *kebele* has experienced invasion of a plant known locally as 'Olyo Weed' (first observed in 2013), which cannot be used for animal feed and which causes injury due to its sharp spikes – but which cannot be weeded.

There is a road that connects the *kebele* centre to the *woreda* town but it is in a bad condition and there are no public transportation facilities. The road was constructed in 2014 and has been significant for a community which relies on relief. There are different alternative market places that the communities use, with the closest being the *woreda* centre market. The other alternative markets include Mehoni and Alamata (in Tigray regional state), Abe'ala (zonal town) and Yalo (neighbouring *woreda* in Afar regional state). The communities travel on foot to all of these markets. To some of the markets it takes more than a day to walk there but recently there have been limited transportation facilities from the *woreda* centre to the far-off markets. The communities travel on foot to the *woreda* centre and take transportation (mainly lorries meant to transport goods) to the far-off markets. There is conflict between clans, normally caused by disagreements over grazing. The conflict can disrupt capacity to oversee/look after the livestock, leaving animals exposed to attacks by wild animals and also restricting movement of people/livestock between communities (undermining the livelihood mechanism). A significant conflict amongst clans in 2013 reportedly led to livestock deaths when community members were unable to access markets to purchase feed.

There is one health post in the *kebele* and a health clinic in the *woreda* centre. There are two Health Extension Workers and a nurse in the *kebele* health post. There is a high school and one elementary school in the *woreda* centre, and there are two elementary schools (one complete up to Grade 8 and the other up to Grade 6) and four alternative schools in the *kebele*. The construction of the school in the *woreda* centre in 2012 has reportedly increased enrolment, although the facilities for water/sanitation are limited. However, there are challenges, given the expectations that children will look after livestock – leading families to have to hire daily labour (at cost). Students who complete Grade 8 go to the *woreda* centre to pursue their high school education.

SNNPR

Boricha: Medo Mukeneka

Medo Mukeneka *kebele* is characterised by a high population density, with a total population of more than 12,000. On top of its high population density, the *kebele* is the most vulnerable *kebele* (among all the *kebele*s in the *woreda*) to recurrent drought and lack of enough rain. The main livelihood of the community is rain-fed farming, producing predominantly maize, haricot beans, sweet potato, and potato. In addition to farming, the community also rely on animal husbandry, keeping cattle, sheep, goats, and donkeys. However, herd size is very small owing to the lack of community grazing land. The community members keep their livestock on their own farm land. The *kebele* has no access to irrigation. Lack of water, roads, and power have been the main challenges the community faces. There are no water points in the *kebele*, rather there is one big tanker built in the *kebele* office compound. However, there are a few ponds dug by the community, which serve as the only source of water – even for drinking.

Due to its inaccessibility, even food aid is distributed to the community in another nearby town, called Belela. The main mode of transportation for the community is motor bikes and animal carts but most community members travel on foot to the market, which takes around an hour.

The 2015–16 El Niño event hit the *kebele* hard, causing complete crop failure. As a result, the *kebele* receives support under the PSNP and continuous support from the GOE, as well from NGOs. Following the 2015–16 drought, the GOE has been providing support in the form of cash as well as in kind (food aid, pasture, and water rationing). Currently, there are around 187 households benefiting under the PSNP, of which 54 households are direct support beneficiaries, whereas the remaining 133 are under the public work support.

There are two public primary schools, one is from Grade 1 up to Grade 4 and the other is from Grade 1 up to Grade 4. In addition, there is also another primary school from Grade 1 to Grade 4, which is managed and sponsored by the Catholic Church. School enrolment among children has been improving over the years; however, retaining these children in the school has been a huge challenge for the schools, especially during the dry seasons. Hence there was school feeding (in the two public schools) in 2016 and 2017, between January and June, to curb school drop-outs.

There is one health post with four extension workers for the *kebele*. The Health Extension Workers provide different services at the health post, i.e. family planning, full vaccination for children, screening and monitoring of malnutrition status of children, lactating and pregnant women, and providing malaria treatment.

Figure 7 Community water ponds in Maddo Mukeneka Kebele, Boricha Woreda

Mirab Abaya: Yayike

The *kebele* is primarily dependent on agriculture (predominantly rain-fed, with limited irrigated farming), followed by animal rearing. The main crops produced in the area are maize and cotton, although there has been diversification, with people producing haricot beans. A small number of farmers produce *teff* and sorghum, and there is a limited amount of cash crop production. The small proportion of the *kebele* that engage in cash crop production grow onions, tomatoes, cabbage, and hot pepper – which is reliant on irrigation canals from Lake Abaya. The irrigation project was started in 2013. Drought has been worsening since 2013, but the location of the *kebele* (being close to high mountainous areas) means it is also exposed to flooding. Furthermore, the *kebele* has experienced crop damage as a result of pests – including a pest known locally as '*Ye American Temch*' in 2016, which destroyed crops. Beyond crops and livestock, people engage in daily labour – including in sand-mining activities and irrigation projects in the neighbouring *kebele*s. There has been migration to Addis Ababa and other urban centres, for work as construction workers.

The *kebele* has experienced infrastructural development in more recent years, including completion of the main road in 2014, electrification in 2015, and establishment of a veterinary clinic in 2016. This has brought other developments, including the initiation of ambulance services, and has facilitated market access to Wajifo and Birbir. People travel by *bajaj*, motor bike or mini-bus (costing around ETB 5). There are also a number of formal and informal institutions, including the OMO Micro Finance Institution and the Yayike Savings and Credit Associations, as well as *iddir* and *equb* institutions. There is a health post and a primary school, covering Grades 1–8. Children who have completed Grade 8 are required to travel to the nearby town for secondary education. There are two Health Extension Workers at the health post, alongside a midwife and a nurse. The health post provides hygiene and sanitation awareness raising/mobilisation, vaccinations, nutritional screening and monitoring services, family planning, and malaria treatment.

Annex C
Summary HHCS profiles

The households selected for the case studies reflected a diversity across different compositions and typologies – including, for example, child-headed, female-headed, and male-headed households; recipients of emergency support or PSNP support; with/without a pregnant or lactating woman; with infant children etc. Whilst five of the households are profiled in further depth in Section 6, to explore the intra-household dynamics mediating impacts and coping mechanisms, in view of the research questions, the boxes below provide summary profiles of the other five households across the different *kebele*s.

Box 32 Amhara – Ebenat: Burkoch HHCS

The family possesses few material assets, and the overall quality of their few belongings is poor. Their clothes and footwear are old, dirty, and in need of repair. Personal hygiene was observed to be limited, and, in general, objects within the houses, such as linen and cloths, were dirty. The mother is receiving treatment for tuberculosis. They have benefited from the PSNP since 2008. During the drought, the family borrowed ETB 5,000 from ACSI in order to buy sorghum and thus stave off destocking. The terms of the loan were that they should return the capital with ETB 1,000 within one year, in a single lump sum payment. Failure to repay the loan would potentially result in forfeit of cattle and land. This family was able to repay the loan in time and did not default.

Household composition and livelihood base: The case study household in Burkoch comprises seven members: a male household head (aged 53), his wife (aged 44), and their five sons (aged six, 12, 14, 16, and 21). The family also had a daughter, but she fell ill and died some years ago. The highest education level achieved was Grade 8. The household possesses six head of cattle, 10 goats, three or four chickens, and 1.5 hectares of farmland—before the 2015–16 drought they had 13 head of cattle and 20 goats, but they de-stocked and have been unable to bring the herd back to its pre-drought level. The family occupies two round mud huts, with thatched roofs, and the homestead also includes one goat pen but no pit latrine or borehole (the main source of water for domestic use is a nearby creek; the family practices open defecation). The parents sleep in one hut with the youngest children, while the older boys sleep in the second hut, which also includes the kitchen area, and is used to receive visitors. The main sources of fuel are wood and animal dung. Like other households in this *kebele*, this one is not connected to any source of electricity.

Box 33 Oromia – Fentale: Haro Kersa HHCS

Household composition and livelihood base: The household comprises 15 people. Their status and reported ages are as follows: one household head (male, 38), two adult women (both wives of the household head, ages unknown), the mother of the household head (age unknown), and 11 children (18, 14, 11, 10, two months, other ages unknown). The household head had no schooling – the highest educational attainment of the household is Grade 9, the current grade of the 14-year-old girl. Another two girls are both in Grade 2. No other children attend school.

Household assets are camels, cattle, goats, sheep, and donkeys – however, the household head was not willing to share the size of the herds. The household is not enrolled in PSNP, though it does receive emergency aid in various forms. There are three huts built of thin sticks and grasses: one for each wife, and one for the grandmother. Each hut is divided into three areas: the husband and wife, along with smaller children, sleep in one room; older children sleep in the other; whereas the third area is used for cooking food on a fire. Animals are kept in pens near to the huts at night-time, and taken to find pasture in the day-time. There are no sanitary facilities; household members rely on open defecation. There are latrines near the school building but they are unclean, with no door. The household do not have electricity, and rely on battery-powered lamps. One of the adult women (wives) is unwell – she has given birth recently, and has a problem with her breast. Her husband has not given her money to travel to get a diagnosis and treatment in Metehara.

Box 34 Tigray - Tanqua Abergele: Gurwure HHCS

Household composition and livelihood base: The household comprises nine people (classified as those living regularly in the same dwelling and sharing meals), with a husband (aged 42) and wife (aged 34) and seven children. Two of the children are boys (aged 18 and seven) and five of the children are girls (aged 15, 13, 11, seven, and four years). The husband is the household head and attained Grade 1 at school. Of the children, the eldest son reached Grade 7 but is no longer in school, whilst the 13-year-old girl is in Grade 7 and the 11-year-old girl is in Grade 3. None of the other younger children are attending school and none of the daughters are married. However, the eldest son is engaged to be married.

The household is made of local stone, with a mud roof (known locally as *Hidmo*). There are five rooms, with the husband and wife in one room, along with the two younger children; the elder boy in a separate room; and one room being rented to a teacher. The household started renting two rooms during the drought, but one teacher has left. The household has no latrine/sanitary facility, but a compost heap where solid waste is dumped. The kitchen is a separate building, with an energy saver local stove – and the household uses locally available firewood as fuel. The household owns 1.75 hectares of land, and has one donkey and one sheep. The household's main livelihood source is crop farming, but they are also dependent on PSNP support and have been part of the programme since 2012/13. During a good harvesting season, the household can produce around four quintals of sorghum. In addition to growing crops on their land, the household grow maize in their back yard – making use of available land in order to support household consumption during the month of September. The oldest boy (18) and the oldest girl (15) are both engaged in gold mining, but this provides very limited income to the household. During the drought, the household were unable to produce any grain from their land – and their income source was reduced to being entirely reliant on PSNP. The household also sold five goats. The eldest son dropped out of school to take part in casual labour, travelling to Tekeze to participate in fishing activities and also taking part in gold mining.

Box 35 Afar – Dulecha: Tirtira HHCS

Household composition and livelihood base: The household comprises eight people and is headed by a man aged 42, alongside his wife aged 35. There are four children of the household head (two sons, one aged 18 and one aged 10; and two daughters, one aged 14 and one aged 12), as well as the grandmother (aged 68) and a niece (aged 17). The household head is illiterate and no other family members are in school, although the niece reported having reached Grade 7 (see observation note below). The house is a mobile home, made from wood and mud, covered with plastic, and comprises one room in which all members of the household previously slept. However, the space is too small and the older children now sleep outside. There are no sanitary facilities. The house is located relatively close to a water source (10 minutes from the household).

Livestock production is the household's main source of income, with milk supply being used by the family and livestock being sold to get cash to purchase food for the household. The household owns two camels and 10 goats. They do not have any farmland. Prior to the drought, the household owned more livestock – estimated by the children to be 14 camels (see note in observations below), 16 cattle, and 50 goats. Livestock were sold or destocked in response to the drought and numbers have not been recovered. They were sold at a significantly reduced price. Whilst, previously, the household reported having a surplus of products, meaning they were able to use butter and also support poorer families in the community, they were subsequently unable to do this – with milk production not enough to cover the daily demands of the household. The household is a participant in the PSNP (having been for six years) and received additional support during the drought (covering the household for the whole year). The household has also started a number of 'off-farm' activities, such as selling charcoal and fuel work, as well as craft works being undertaken by the women. During the drought, the head and the elder son migrated with their camels to Ankober (Amhara) and Fentale (Oromia), respectively. The household also reported clan conflicts which had the potential to inflict significant damage to livestock, as well as individuals.

Box 36 SNNPR – Mirab Abaya: Yayike HHCS

Household composition and livelihood base: There are nine household members, including the husband and wife, currently residing in the family. Recently, the eldest of the girls returned from Arba Minch town where she used to work as a housemaid, in order to celebrate the Meskel with her family. The husband is the head of the household, and is 36 years old, whereas the wife is aged 30. The husband is educated up to Grade 3, whilst the wife has never been to school. Five of their children are girls (aged 18, 17, 14, 13, and 9), and the two boys are aged 16 and 10. All of the children, with the exception of the eldest girl (who is planning to go back to Araba Minch town), are registered at school for the upcoming academic year.

The household mainly depends on farming activity, producing maize, cotton, and haricot beans on their one hectare of land. However, when it does not rain, they depend on daily labour and petty trading. All of the children, except the two younger ones and the eldest daughter (in Arba Minch), work in the nearby irrigation scheme, earning between ETB 20 and ETB 30 per day. The husband and wife engage in petty trading activities – with the wife usually buying *kocho* (false banana) from the villagers and selling it in the markets. The family also depends on selling charcoal and firewood (which are illegal activities). The household has been receiving support from the PSNP since 2008. The household has depleted all of their livestock. Currently they only have two goats of their own but they keep a cow and two more goats belonging to another family to share the calf and kid when they give birth (under a cow-calf lease agreement).

Annex D
List of key informants

D.1 FGD, community timeline, and HHCS participants

Amhara

Ebenat: Burkoch

In total, 20 adults (10 adult males and 10 adult females) and 26 children (eight older boys, 10 older girls, five younger boys, and three younger girls) participated in the FGDs.

In addition, the individuals listed below participated in the community timeline mapping and the HHCS.

No.	Participant	Date met
1	*Kebele* leader	22 August 2017
2	Deputy *kebele* leader	22 August 2017
3	Agricultural office representative	22 August 2017
4	Teacher	22 August 2017
5	Elders (2)	22 August 2017
1	Male HHCS head (aged 53)	25 August 2017
2	Female HHCS (aged 44)	25 August 2017
3	Son HHCS (aged 14)	26 August 2017
4	Son HHCS (aged 12)	26 August 2017

Guba Lafto: Sivilkay

In total, 25 adults (14 adult males and 11 adult females) and 34 children (15 older boys, seven older girls, six younger boys, and six younger girls) participated in the FGDs.

In addition, the individuals listed below participated in the community timeline mapping and the HHCS. Note that the community timeline mapping was carried out in a meeting attended by numerous elders and residents, in addition to the invited *kebele* officials.

No.	Participant	Date met
1	*Kebele* leader	29 August 2017
2	Deputy *kebele* leader	29 August 2017
3	Health Extension Worker	29 August 2017
4	Women's Affairs Representative	29 August 2017
5	Community coordinator	29 August 2017
6	Elders and community members	29 August 2017
1	Female HHCS Head (aged 30)	01 September 2017
2	Son HHCS (aged 17)	01 September 2017
3	Son HHCS (aged 12)	01 September 2017

Oromia

Fentale: Haro Kersa

In total, 20 adults (10 adult males and 10 adult females) and 28 children (10 older boys, 10 older girls, four younger boys, and four younger girls) participated in the FGDs.

In addition, the individuals listed below participated in the community timeline mapping and the HHCS.

No.	Participant	Date met
1	*Kebele* administration representative	21 August 2017
2	Agricultural extension worker	21 August 2017
3	Administration representative	21 August 2017
4	Health Extension Worker	21 August 2017
1	Male household head (aged 38)	23 August 2017
2	Female HHCS (age unknown)	23 August 2017
3	Daughter HHCS (aged 14)	24 August 2017
4	Daughter HHCS (aged 11)	24 August 2017

Shashemene Zuria: Faji Gole

In total, 19 adults (10 adult males and nine adult females) and 31 children (10 older boys, 10 older girls, seven younger girls, and four younger boys) participated in the FGDs.

In addition, the individuals listed below participated in the community timeline mapping and the HHCS.

No.	Participant	Date met
1	*Kebele* administration representative	28 August, 2017
2	*Kebele* manager	28 August, 2017
3	*Kebele* administration representative	28 August, 2017
4	Health Extension Worker	28 August, 2017
5	Development agent	28 August, 2017
6	Community elder	28 August, 2017
7	Community elder	28 August, 2017
1	Male HHCS head (aged 32)	29 August, 2017
2	Female HHCS (aged 29)	29 August, 2017
3	Daughter HHCS (aged 14)	30 August, 2017
4	Son HHCS (aged 10)	30 August, 2017

Tigray

Tanqua Abergele: Gurwure

In total, 20 adults (11 adult males, nine adult females) and 28 **children (10 older boys, nine older girls, five younger boys, and four younger girls) participated in FGDs.**

In addition, the individuals listed below participated in the community timeline mapping and the HHCS.

No.	Participant	Date met
1	Community elder	22 August 2017
2	Community elder	22 August 2017
3	*Kebele* social affairs representative	22 August 2017
4	*Kebele* women's affairs representative	22 August 2017
1	Male HHCS head (aged 42)	24 August 2017
2	Female HHCS (aged 34)	24 August 2017
3	Daughter HHCS (aged 14)	25 August 2017
4	Daughter HHCS (aged 11)	25 August 2017

Ofla: Adishum Bereket

In total, 19 adults (nine adult males, 10 adult females) and 30 children (10 older boys, 10 older girls, five younger boys, and five younger girls) participated in FGDs.

In addition, the individuals listed below participated in the community timeline mapping and the HHCS.

No.	Participant	Date met
1	Elder	28 August 2017
2	Farmers' representative	28 August 2017
3	Irrigation user	28 August 2017
4	Development agent	28 August 2017
1	Male HHCS head (aged 60)	31 August 2017
2	Female HHCS (aged 45)	31 August 2017
3	Daughter HHCS (aged 18)	01 September 2017
4	Son HHCS (aged 12)	01 September 2017

Afar

Dulecha: Tirtira

In total, 19 adults (nine adult men, 10 adult women) and 28 children (nine older boys, 10 older girls, five younger boys, and four younger girls) participated in FGDs.

In addition, the individuals listed below participated in the community timeline mapping and the HHCS.

No.	Participant	Date met
1	Elder	18 September 2017
2	Elder	18 September 2017
3	Elder	18 September 2017
4	Community Leader	18 September 2017
5	House of *Kebele* parliament representative	18 September 2017
1	Male HHCS head (aged 42)	20 September 2017
2	Female HHCS (aged 35)	20 September 2017
3	Niece HHCS (aged 17)	21 September 2017
4	Son HHCS (aged 10)	21 September 2017

Megale: Addu

In total, 20 adults (10 adult men, 10 adult women) and 26 children (eight older boys, eight older girls, six younger girls, and four younger boys) participated in the FGDs.

In addition, the individuals listed below participated in the community timeline mapping and the HHCS.

No.	Participant	Date met
1	Community elder	29 September 2017
2	Community leader	29 September 2017
3	Community member	29 September 2017
4	Community member	29 September 2017
1	Male HHCS head (aged 40)	01 October 2017
2	Female HHCS (aged)	02 October 2017
3	Daughter HHCS (aged 15)	02 October 2017
4	Son HHCS (aged 12)	02 October 2017

SNNPR

Boricha: Medo Mukeneka

In total, 25 adults (13 male adults and 12 female adults) and 34 children (12 older boys, 12 older girls, seven younger boys, and three younger girls) participated in the FGDs.

In addition, the individuals listed below participated in the community timeline mapping and the HHCS.

No.	Participant	Date met
1	*Kebele* women's league	18 September 2017
2	*Kebele* chairman	18 September 2017
3	Health Extension Worker	18 September 2017
4	Deputy school director	18 September 2017
5	Social Affairs and Community Policing	18 September 2017
6	Local expert	18 September 2017
7	Local expert	18 September 2017
1	Male HHCS aged 64	21 Sep 2017
2	Female HHCS (aged 40)	21 Sep 2017
3	Son HHCS (aged 17)	22 Sep 2017
4	Daughter HHCS (aged 10)	22 Sep 2017

Mirab Abaya: Yayike

In total, 23 adults (12 adult male and 11 adult female) and 32 children (10 older boys, 12 older girls, six younger girls, and four younger boys) participated in FGDs.

In addition, the individuals listed below participated in the community timeline mapping and the HHCS.

No.	Participant	Date met
1	*Kebele* chairman	03 October 2017
2	*Kebele* manager	03 October 2017
3	OMO microfinance institution representative	03 October 2017
4	Health Extension Worker	03 October 2017
5	Agricultural Extension Worker	03 October 2017
6	*Kebele Shengo* speaker	03 October 2017
1	Male HHCS (aged 36)	07 October 2017
2	Female HHCS (aged 30)	07 October 2017
3	Daughter HHCS (aged 14)	07 October 2017
4	Daughter HHCS (aged 9)	07 October 2017

D.2 People met with at regional level (key informants)

Amhara

Ebenat: Burkoch

In total, seven people were met with, including individuals at the *woreda* and *kebele* levels.

No.	Position	Date met
1	*Woreda* agriculture office	22 August 2017
2	*Kebele* leader	22 August 2017
3	*Woreda* agriculture Office	24 August 2017
4	*Woreda* education task force	24 August 2017
5	*Kebele* school principal	25 August 2017
6	*Kebele* Health Extension Worker,	25 August 2017
7	*Woreda* Disaster Prevention and Crop Emergency	26 August 2017

Guba Lafto: Sivilkay

In total, five people were met with, including individuals at the *woreda* and *kebele* levels.

No.	Position	Date met
1	*Kebele* leader	29 August 2017
2	Health Extension Worker, *kebele office*	30 August 2017
3	Early warning, *woreda office representative*	31 August 2017

4	Women and Children's Affairs, *woreda office representative*	01 September 2017
5	Head of w*oreda* Education Office	01 September 2017

Oromia

Fentale: Haro Kersa

In total, seven individuals were met with, which included representatives at the *woreda* level and at the *kebele* level.

No.	Position	Date met
1	*Woreda* administration representative	21 August 2017
2	MoWCA (*woreda* office) representative	21 August 2017
3	Disaster Prevention and Preparedness Office represenative	21 and 24 August 2017
4	Agricultural Extension Worker	25 August 2017
5	Fentale Children's and Family Charitable Organisation representative	24 August 2017
6	Health Extension Worker	22 August 2017
7	Health Extension Worker	23 August 2017

Shashemene Zuria: Faji Gole

In total, six individuals were met with, which included representatives at the *woreda* level and at the *kebele* level.

No.	Position	Date met
1	*Woreda* administration representative	28 August 2017
2	MoWCA (*woreda* office) representative	28 August 2017
3	*Kebele* manager	29 August 2017
4	School director	30 August 2017
5	*Kebele* health centre	31 August 2017
6	Agricultural extension worker	31 August 2017

Tigray

Tanqua Abergele: Gurwure

In total, 13 individuals were met with, which included representatives at the *woreda* level.

No.	Position	Date met
1	*Kebele* propaganda representative	22 August 2017
2	*Kebele* chair/secretary	22 August 2017
3	*Kebele* administrator	22 August 2017
4	*Kebele* livestock expert/ Development agent	22 August 2017
5	PSNP supervisor	22 August 2017
6	Health Extension Worker	23 August 2017
7	School director	23 August 2017
8	Women's affairs representative	24 August 2017
9	*Woreda* health office	23 August 2017
10	*Woreda* water resources office	23 August 2017
11	Agriculture and Rural Development	23 August 2017
12	Dedebit Credit and Savings Institution	25 August 2017
13	Child household head (aged 17)	25 August 2017

Ofla: Adishum Bereket

A total of 12 individuals were met with, which included *woreda* officials, representatives from two development partners, *kebele* representatives, and household members.

No.	Position	Date met
1	*Woreda* land use	28 August 2017
2	*Woreda*	28 August 2017
3	*Woreda* agriculture	28 August 2017
4	Savings and credit association	29 August 2017
5	*Kebele* Health Extension Worker	29 August 2017
6	School director	29 August 2017
7	*Woreda* health office	30 August 2017
8	*Woreda* water and mining office	30 August 2017
9	*Kebele* chair	29 August 2017
10	Action Aid	30 August 2017
11	Male head (aged 47)	31 August 2017
12	Female household member (aged 37)	31 August 2017

Afar

Dulecha: Tirtira

In Tirtira, a total of 13 individuals were met with for KIIs, which includes *woreda* officials, *woreda* sector offices, *kebele* sector offices, and *kebele* representatives.

No.	Position	Date met
1	*Woreda* administration	18 September 2017
2	Agricultural extension expert	18 September 2017
3	Agricultural input supply expert	18 September 2017
4	Irrigation and drinking water process owner	19 September 2017
5	Health Extension Worker	19 September 2017
6	School cluster supervisor and former school director	20 September 2017
7	Development agent	20 September 2017
8	*Woreda* health office	21 September 2017
9	PCDP project	21 September 2017
10	Disaster prevention and preparedness	22 September 2017
11	Pastoralist office	22 September 2017
12	*Kebele* administration	23 September 2017
13	Credit and savings cooperative	23 September 2017

Megale *Woreda*: Addu

In Addu *kebele*, a total of 15 individuals were met with for KIIs, which includes *woreda* officials, *woreda* sector offices, NGOs, *kebele* sector offices, and *kebele* representatives.

No.	Position	Date met
1	*Woreda* administration	28 September 2017
2	Pastoralist office	28 September 2017
3	Agricultural expert	28 September 2017
4	Animal health expert	28 September 2017
5	Disaster prevention and preparedness office	28 September 2017
6	Health office	29 September 2017
7	Education office	29 September 2017
8	Education office	29 September 2017
9	Water office	30 September 2017
10	*Kebele* chairman	30 September 2017
11	*Kebele* health officer	30 September 2017
12	School director	01 October 2017
13	School unit leader	01 October 2017
14	*Kebele* development agent	02 October 2017
15	Cooperazione International	03 October 2017

SNNPR

Boricha *Woreda*, Medo Mukeneka

A total of 12 individuals were contacted at the *woreda* and *kebele* level (including w*oreda* and k*ebele* officials for introductory meetings).

No.	Position	Date met
1	Boricha *Woreda* Southern Ethiopian People's Democratic Movement representative	18 September 2017
2	DRM	18 September 2017
3	*Woreda*'s women and children's affairs office	18 September 2017
4	*Kebele* chairman	18 September 2017
5	Health Extension Worker	18 September 2017
6	Deputy school director	18 September 2017
7	Head, women's league	18 September 2017
8	Social affairs and community policing	19 September 2017
9	Agricultural Extension Worker	20 September 2017
10	School director	21 September 2017
11	Health Extension Worker	20 September 2017
12	DRM office	21 September 2017

Mirab Abaya: Yayike

For Mirab Abaya, Yayike *Kebele*, we interviewed 13 individuals, including the *woreda* and *kebele* officials.

No.	Position	Date met
1	Mirab Abaya *woreda* administration	03 October 2017
2	Mirab Abaya DRM	03 October 2017
3	DRM office	03 October 2017

4	Mirab Abaya women and children's affairs	03 October 2017
5	Yayike *kebele* chairman	04 October 2017
6	OMO microfinance institution facilitator	03 October 2017
7	Yayike *kebele* manager	03 October 2017
8	*Kebele Shengo* speaker	03 October 2017
9	Agricultural Extension Worker	04 October 2017
10	School director	05 October 2017
11	Health Extension Worker	05 October 2017
12	*Woreda* DRM office	06 October 2017
13	Women and children's affairs office	06 October 2017

D.3 Key informants (national level) – representatives

The names of organisations have been detailed in the interests of data anonymity.

No.	Organisation	Date met
1	Independent consultant	11 October 2017
2	WFP (Vulnerability Analysis and Mapping Unit)	21 September 2017
3	Young Lives	04 September 2017
4	Christian Children Fund Canada	05 September 2017
5	Growth through Nutrition, Save the Children	18 August 2017
6	World Bank	18 September 2017
7	Child Protection Directorate, MoWCA	25 September 2017
8	GRAD, CARE Ethiopia	04 September 2017
9	Office of Assets and Livelihoods in Transition, USAID Ethiopia	10 October 2017
10	World Bank	29 September 2017
11	Humanitarian Programme, Oxfam Ethiopia	10 May 2017
12	Ministry of Education (Education in Emergencies)	08 September 2017
13	Ministry of Education (Education in Emergencies)	08 September 2017
14	Agriteam Canada	22 August 2017
15	Save the Children Ethiopia	28 July 2017
16	World Bank Ethiopia	29 September 2017
17	NDRMC	14 August 2017
18	WFP (Vulnerability Analysis and Mapping Unit)	21 September 2017
19	CARE Joint Emergency Operation Plan	05 September 2017
20	Ministry of Agriculture and Natural Resources (Food Security Coordination Directorate)	21 September 2017
21	ChildFund Ethiopia	03 October 2017

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