



HUMANITARIAN EVIDENCE PROGRAMME

The impact of food assistance on pastoralist livelihoods in humanitarian crises: An evidence synthesis protocol

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Picture

The pastoralist communities of Turkana, Kenya experience the longest period of drought in their history with their livestock dying, and struggle to feed themselves, reliant on food aid. Andy Hall for Oxfam. March 2011.

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1. BACKGROUND

1.1. DESCRIPTION OF THE PROBLEM

Pastoralists are people whose livelihoods depend (not necessarily exclusively) on livestock keeping. They live on all of the world's inhabited continents, primarily in areas where livelihoods based solely on agricultural production are not possible because of aridity, high elevation, or a cold climate. See Section 4 for a more detailed definition of pastoralism and related debates.

Such marginal areas are prone to crises such as droughts, while the need to access grazing land has historically contributed to conflict between different pastoralist communities and between them and their agriculturalist neighbours. As a result, pastoralist livelihoods have usually been hazardous and unpredictable. However, pastoralist communities have developed coping and adaptation strategies—often related to their ability to relocate community members and their livestock to areas unaffected by the crisis they faced at a particular time. Such strategies have allowed them to not only moderate the impacts of shocks, but also harness climatic variability to deliver high levels of productivity otherwise impossible in the harsh environments which they inhabit (Butt et al., 2009; Hesse and Pattison, 2013; Morton et al., 2006).

Given their successful adaptation to highly variable conditions, pastoralist livelihoods arguably remain uniquely prepared for the increasing environmental unpredictability brought about by climate change (Nassef et al., 2009). However, despite their adaptability, pastoralists' ability to continue their way of life – and therefore cope with crises such as conflict and changing environmental conditions – has come under increasing strain around the world, a process which continues to this day (e.g. McCabe, 1990; Markakis, 2004). Pastoralists have seen their livelihoods adversely affected by a number of factors. These include pastoralists' political marginalization, loss of grazing land (given over to nature reserves or agricultural production), restrictions on mobility and other detrimental policies pursued by national governments, the increase of livestock populations caused by disease reduction made possible by advances in veterinary care, disasters (primarily droughts, but also floods, snow disasters and epizootics), and conflict (DFID, n.d.; Markakis, 2004). In East Africa and the Horn in particular, it is claimed that 'the material base of pastoralism has been undermined, possibly beyond recovery. Crises have increased in frequency and intensity, and pastoralists are no longer able to overcome them without assistance from outside' (Markakis 2004: 4).

While such sceptical assessments have been contested (e.g. Hesse and MacGregor, 2006; Nassef et al., 2009; Nori et al., 2008), there is evidence that this process has left pastoralists, in East Africa and the Horn and elsewhere, increasingly vulnerable to crises. This is either because their ability to take advantage of previous coping strategies has deteriorated or because these strategies are no longer adequate for the scale of shocks that they face. Many such crises have affected pastoralist populations, especially in Africa. Although data on the number of affected pastoralists is often unavailable, pastoralists constitute the majority of the affected populations in at least some of the crises. It was the case, for example, during the 2006 drought in the Horn of Africa (ODI, 2006). That drought caused severe shortage of food which affected some 11 million people in Djibouti, Ethiopia, Kenya, and Somalia (FAO, 2006). In Somalia alone, 80 percent of the population is pastoralist (Central Bank of Somalia, n.d.). Famine returned to East Africa and the Horn in 2011 and 2012; in Somalia, where the food crisis was most acute, some 260,000 people died, another 750,000 were affected, and 3.3 million people were in need of immediate life-saving assistance. Altogether, 13 million people were affected by the food security crisis in the Horn of Africa (Maxwell et al., 2014:5). Similarly, 800,000 people – including many pastoralists – faced extreme food insecurity and another 800,000 were moderately insecure during the 2005 and 2006 Niger food crisis (Aker, 2008:7). While crises have primarily affected African pastoralists, they have also occurred elsewhere. For example, 8,000 Mongolian pastoralists affected by *dzud* (harsh winter) received food assistance in 2010 (Action Against Hunger, 2011).

1.2. RESPONSES TO THE PROBLEM

There have been efforts to address the immediate and long-term needs of pastoralist populations to alleviate their suffering during humanitarian crises. Development initiatives intended to modernize pastoralists' livelihoods, and so reduce their susceptibility to crises, have focused primarily on commercialization of pastoral production, prevention of overstocking and promotion of agricultural production and sedentarization (Markakis, 2004:16-18). Others have attempted to improve rangeland management (e.g. Allsopp et al., 2007). In addition, a few countries have introduced legislation which formally protects pastoralist livelihoods (Hesse and Thébaud, 2006). Some humanitarian interventions have also emphasized the basis of pastoralists' livelihoods and attempted to support them by deworming and feeding animals in order to keep them in a market condition, promoting mass commercial destocking to enable pastoralists to buy their own food, and restocking lost livestock to make up losses (Levine, 2008:2; Watson and Catley, 2008:9-13). Others have addressed the needs related to health, social protection, and water, sanitation and hygiene (WASH) (Downie, 2011).

However, the priority of most humanitarian interventions – especially given that they have been primarily caused by inadequate access to food – has been nutrition and food security. Provision of food assistance in an emergency context can take a number of forms. The most commonly used type of humanitarian assistance to pastoralists has been direct provision of food in-kind, which can be either short- or long-term and concessional or tied to work, as in the case of the World Food Programme's (WFP) Food Assistance for Assets programmes (WFP, n.d.). In addition, recent innovations in food provision in humanitarian settings have involved the use of cash transfers and vouchers (ECHO, 2013; Harvey and Bailey, 2011; Manley, 2011; Smith et al., 2011; Tappis and Doocy, 2015). Alternatively, the price of food in an affected area can be subsidized (Levine, 2008: 2). These market-based approaches have gained prominence in recent years.

2. PURPOSE OF THE REVIEW

Humanitarian crises have affected millions of pastoralists and led to a range of interventions which have mobilized considerable resources in an attempt to alleviate suffering and improve the viability of pastoral livelihoods. However, evidence of the effects which these interventions have had on the pastoralists – particularly the extent to which they have achieved their stated objectives – is, at best, fragmentary. The assessment of the effectiveness of both development programmes and legislation targeting pastoralists has generally been negative, but the evidence tends to be limited to selective case studies which should not be used to draw general inferences (e.g. Fratkin, 2001; Fratkin et al., 2004; Hesse and Thébaud, 2006; Markakis, 2004). Humanitarian interventions have been assessed more systematically. There are evidence syntheses which address in-kind food provision (HEP nutrition review, forthcoming), cash transfers and vouchers (ECHO, 2013; Harvey and Bailey, 2011; Manley, 2011; Smith et al., 2011; Tappis and Doocy, 2015), health (Bellos et al., 2010; London School of Hygiene and Tropical Medicine, 2013; Crumlish, 2010; HEP mental health review, forthcoming), protection (Spangaro et al., 2013; Vu et al., 2014; Witse et al., 2013; HEP child protection review, forthcoming), and WASH (Parkinson, 2009; Yates et al., forthcoming). Given the scale of humanitarian response to the crises which have affected pastoralist populations, some of the evidence provided in these reviews is applicable to the particular experience of pastoralists. However, to the review team's knowledge, there is no evidence synthesis to date that specifically addresses the impacts of food assistance provided in the context of humanitarian interventions on pastoralists' livelihoods.

The distinctiveness of pastoralists – including factors related to the erosion of their livelihood strategies and the difficulty posed by identification of frequently mobile households – and their particular vulnerability to humanitarian crises suggest that the effects of humanitarian interventions targeting them are likely to differ significantly from other populations. There is, therefore, great need for systematic evidence of the impacts of humanitarian interventions on pastoralists (as well as corresponding evidence of the impacts of development interventions) to inform policy and to suggest a future research or programme monitoring agenda. It is impossible to provide comprehensive evidence of all impacts in the context of a single review. Because the provision of food assistance to populations experiencing high food insecurity has long been the dominant form of relief assistance, it follows that it should be the subject of the first evidence synthesis addressing the impacts of humanitarian interventions on pastoralists.

The purpose of this review is, therefore, to use evidence synthesis methods (specifically a scoping study approach), to identify, synthesize, evaluate, and estimate both the short- and long-term effects that provision of food assistance in the context of humanitarian crises has had on pastoralist livelihoods. This investigation will include evaluating the intended impacts of the interventions, that is, their effectiveness and efficiency in providing food assistance to those in need and the use of food by its beneficiaries for the intended purposes. Equally important is examination of other, often unintended, effects of the provision of food assistance. The literature on pastoralist societies suggests some potential unintended consequences of food assistance, including long-term dependency on external provision of food (Abbink et al., 2014; Bassi, 2010; Boulton, 2012; Helland, 1998; Levine, 2010), exclusion of the poorest (Bishop and Hilhorst, 2010; Maxwell et al., 2014: 28) and undermining of existing social support networks (Sharp, 1999). Based on its expertise in pastoralist livelihoods, the review team speculates that food assistance may have additional effects which, to its members' knowledge, have not been addressed in the literature. For example, the provision of assistance could lead to shifts in livelihood strategies, especially changed preferences for specific assets (animal species or, among agropastoralists, access to land for seasonal agricultural production) or diversification of strategies to include non-pastoral production. Provision could also result in changed asset (including sale, acquisition of assets, and asset types) and income dynamics, shifts in mobility patterns (including sedentarization), other household-level (related to household size, household income, distribution of assets, the role of household members in specific aspects of livelihood strategies) and individual-level (acquisition of new skills, educational attainment, gender roles) shifts, and conflict and insecurity.

The feasibility of investigating these possible effects will depend on the availability of evidence identified during the systematic search process. Furthermore, identification of effects will be constrained by the nature of evidence. In the absence of experimental evidence (which is indicated by initial scoping), an effort to make causal inferences is fraught with challenges and necessarily incomplete. The existence of such causal relationships cannot be conclusively demonstrated; instead, the review will attempt to identify *potential* causal relationships (i.e. associations) between provision of food assistance and changes in various aspects of pastoralist livelihoods. This issue is considered in more detail in Section 4. As far as it is possible to establish causality, the investigation of the effects of food assistance on pastoralist livelihoods will follow the research questions presented in the subsequent section.

3. RESEARCH OBJECTIVES

The review aims to identify, synthesize, evaluate, and estimate both the short- and long-term effects which provision of food assistance in the context of humanitarian crises has had on pastoralist livelihoods from countries. In order to address this primary objective, a number of research questions are posed:

1. What are the populations and regions affected by food assistance interventions targeting pastoralists? What are the commonalities and variation between these populations and regions?
2. In what ways have pastoralist livelihood strategies changed since 1967 (and to what extent have non-pastoralist livelihood strategies supplanted those)? What is the potential causal relationship between these changes and food assistance?
3. What types of food assistance interventions have been offered to pastoralist populations in the context of humanitarian crises? How have these interventions, the nature of the strategies, distribution of food assistance and its duration changed over time?
4. In what ways do pastoralists use the food they receive? Do they consume it, or use it as livestock feed or a commodity to sell or barter?
5. In what ways have pastoralist asset dynamics changed? What is the potential causal relationship between these changes and food assistance?
6. In what ways have income dynamics changed? What is the potential causal relationship between these changes and food assistance?
7. In what ways have mobility patterns changed? What is the potential causal relationship between these changes and food assistance?
8. What shifts have taken place in the social relations of pastoralist populations, including in relation to social support networks? What is the potential causal relationship between these changes and food assistance?
9. What household-level shifts have taken place among pastoralist populations? What is the potential causal relationship between these changes and food assistance?
10. What individual-level shifts have taken place among pastoralist populations? What is the potential causal relationship between these changes and food assistance?
11. In what ways have the security conditions within which pastoralist livelihoods take place changed? What is the potential causal relationship between these changes and food assistance?
12. In what ways has access to food and non-food items in pastoralist areas changed, including in relation to markets? What is the potential causal relationship between these changes and food assistance?

4. DEFINITIONAL AND CONCEPTUAL ISSUES

4.1. DEFINITIONS

Pastoralism

Section 1 of the protocol offers a simple definition of pastoralists as people whose livelihoods rely primarily on livestock keeping and who occupy marginal areas incapable of supporting an exclusively or primarily agriculturalist population. By extension, pastoralism is the mode of production practiced by such people. Such a basic definition should not be controversial. Many specific aspects of pastoralism are, however, contested.

First, pastoralist societies have developed complex modes of social organization and cultural patterns which are intrinsically integrated with the pastoralist mode of production. In this respect, therefore, pastoralism is not just a livelihood strategy, but a way of life (Markakis, 2004: 4). The erosion of the basis of pastoralist livelihoods in recent decades may imply the decline of pastoralist cultures and societies but, if they survive, their direct link with the pastoralist mode of production may weaken. If this is the case, the decline of pastoralism as a set of livelihood strategies does not necessarily require a corresponding decay of pastoralist culture and society or the disappearance of people who identify themselves as pastoralists. Therefore, inclusion of these non-economic practices radically expands a definition of pastoralism.

Second, the commonly accepted classification of livelihood systems presents a continuity of practices from 'pure' pastoralism to exclusive reliance on agriculture, or urban livelihoods. In this typology differences between livelihood systems are effectively a matter of degree: of mobility (nomadic, transhumant, sedentary), of average rainfall (desert, arid, semi-arid, sub-humid), of interaction with the market economy (subsistence-based, market-driven), of attainment of modernity (traditional, modernizing, modern), and, of course, of dependence on livestock and involvement in agriculture (Krätli et al., 2015: 15). The temptation that this classification offers is to restrict the definition of the term to 'pure pastoralism', i.e. pastoralist livelihood which is nomadic, subsistence-based, traditional, and dependent solely on livestock keeping, and to develop other labels, such as agropastoralism, to refer to the other degrees. While this results in elegant categorizations, the deep connections between modes of production which rely in some way on livestock keeping are concealed.

For this reason, a broad definition of pastoralism is likely to offer a better lens to consider the subject of this review. The review will follow a definition which incorporates the characteristics common to a wide range of pastoralist livelihood systems and is derived from the list compiled by Hesse and MacGregor (2006: 5). In this definition, pastoralists are people who depend on livestock for a significant proportion of their food and income, although they may also cultivate crops and carry out other economic activities. Their livestock can be raised for both subsistence and market needs, but they represent more than economic assets. Instead, they constitute cultural, social, and spiritual assets which define social identity. Livestock depend on natural pastures, the management of which may require mobility of herds and pastoralists themselves. Relatedly, pastoralism is the livelihood system of pastoralists.

This broad definition includes a wide range of livelihood systems and purposely makes no distinction between different 'degrees' of pastoralism listed earlier in the section. It is also likely to capture more food assistance interventions and, therefore, provide a fuller understanding of the impacts of food assistance on diverse livestock-keeping populations. It is, however, necessary to be mindful that such a broad understanding of pastoralism is not universally accepted and that the use of the term in some sources identified during the search process will either refer exclusively to the pastoralist mode of production or to 'pure

pastoralism'. Furthermore, the review team will need to be cognizant of the possible presence in the sources of the commonly-held biases against pastoralists brought about by their economic and political marginalization (Ibid.: 15).

Livelihoods

Livelihoods are defined as the 'capabilities, assets (including both material and social resources), and activities required for a means of living' (Scoones, 1998: 5). Therefore, pastoralist livelihoods represent:

1. Capabilities such as knowledge, skills and training required to raise and properly care for livestock and navigate territories which pastoralists occupy. This includes locating appropriate grazing areas and other sources of food and interacting with other pastoralist and non-pastoralist populations;
2. Assets such as livestock, access to grazing and agricultural land, tools, and social organization conducive to pastoral livelihoods;
3. The activities which these capabilities and assets make possible, that is livestock keeping and, where applicable, seasonal agricultural production.

Food assistance

Food assistance refers to any direct food or food procurement transfer to food-insecure individuals or households for the purpose of increasing the quality and/or quantity of food consumed or, in some cases, as a form of income transfer. Food assistance can be provided in the context of low food availability or low food access. It can be provided by organizations such as national governments, non-government organizations, and international organizations or their specialized agencies. Respondents can receive it on a short-term basis or, in the context of protracted emergencies, for extended periods of time. Food assistance provision in humanitarian crises can take the form of financial support (for example through cash transfers or vouchers) or direct provision of food in-kind. Recipients can receive food either concessionally or in exchange for work. The term 'food assistance' has largely replaced 'food aid' in the language used by the international community (Clay, 2010; Harvey et al., 2010).

Crisis and humanitarian crisis

A crisis or shock is defined as an event or events which destabilise the livelihoods of a population. A humanitarian crisis is defined as an event or events which pose an exceptional and generalized threat to the health, safety, wellbeing, or subsistence of a population. This phenomenon can have either slow or rapid onset, be acute or chronic, and be either natural in origin or man-made (or its causes can be attributable to both natural and man-made factors) (Chi et al., 2015).

4.2. CAUSALITY

This review aims to make attributable, but at a minimum, contributable inferences about the provision of food assistance in the context of humanitarian interventions and various aspects of pastoralist livelihoods. Identification of causal relationships between phenomena is one of the central concerns of social science. In part, the objective of causal explanation is to inductively describe the magnitude and strength of an event or factor leading to a change in an outcome, and account for the heterogeneity around this change (Hedström, 2005: 13). Although it is the most reliable method in aiding in the establishment of causal relationships, randomized controlled trials (RCTs) are rarely conducted in humanitarian settings and cannot be conducted retrospectively (Gerber and Green, 2012).

Although the causal inference from results estimated from an RCT cannot be matched, a plausible claim about the existence of a causal relationship can be made if an explanation

shows how phenomena are generated through specification of mechanisms which connect the explanans with the explanandum (Hedström, 2005: 14 and 24-25; also Elster, 1999, Little, 1991, Schelling, 1978). For this reason, this review will attempt to specify the causal mechanisms which link provision of food assistance to changes in pastoralist livelihoods. When possible, the review team will seek to attribute outcomes to specific interventions. However, it anticipated that in many cases only contributable inferences will be possible.

5. SCOPE OF THE REVIEW

Pastoralist populations have experienced crises and inadequate supply of food in multiple locations around the world, including in high income countries (although interventions such as food price subsidies used in high income settings are not commonly described as food assistance) (Meakin and Curvets, 2009). For this reason, the review does not *a priori* exclude high income countries from consideration. In addition, while food assistance interventions targeting pastoralists have taken place outside Africa (for example in Mongolia), the majority of them have focused on either East Africa and the Horn or the Sahel. For this reason, while the scope of the review is not specifically restricted to Africa, the review team anticipates that the vast majority of evidence will relate to interventions on that continent (DFID, n.d.).

A number of pastoralist populations, primarily in Africa, have been affected by humanitarian crises and targeted by food assistance interventions in the period since the Food Aid Convention was negotiated in 1967. It is plausible to assume that the impacts that these interventions have had on various populations have differed. For this reason, we will not restrict the scope of the review to particular populations *a priori*. However, reduction of the number or type of pastoralist populations considered in the review may turn out to be appropriate at a larger stage of the research process, once the search process has been completed and the sources have been consulted. While *a priori* restriction would lead to biased results, the review team anticipates the majority of potentially relevant literature to be from the 1980s onward.

Food assistance provision in humanitarian crises can take the form of financial support (for example through cash transfers or vouchers) or direct provision of food in-kind by national governments, non-government organizations, and international organizations or their specialised agencies. There is extensive evidence available on the impacts of cash transfers and vouchers on (not necessarily pastoralist) populations affected by humanitarian crises (ECHO, 2013; Harvey and Bailey, 2011; Manley, 2011; Smith et al., 2011; Tappis and Doocy, 2015). For this reason, this review will focus on the impacts of food supplied in-kind, either concessionally or through 'Food for Work'/'Food Assistance for Assets' programmes. Pastoralist recipients may also use food obtained through humanitarian interventions in multiple ways, for instance as livestock feed or a commodity to sell or barter, as well as a source of nutrition for household members.

Based on initial scoping suggesting lack of relevant experimental evidence, both attributable and contributable causal inferences regarding food assistance provision and changes in pastoralist livelihoods are difficult to make. The comparative method can greatly facilitate this task and help to identify possible causal mechanisms. A pastoralist population which has received food assistance can be compared to pastoralist populations (especially ones living in similar contexts) which have not, pastoralist populations which have received other types of food assistance (including cash transfers and vouchers), pastoralist populations which have been affected by different kinds of humanitarian crises (for example slow as opposed to rapid onset ones), pastoralist populations which have not experienced comparable humanitarian crises, and to the historical experiences of the same population. Only some of these types of comparison may prove useful in the analysis of potential causal relationships.

When available, comparison could help to evaluate the presence of possible causal relationships and, as such, to define the outcomes of food assistance provision to pastoralists. These outcomes can be related to the stated objectives of humanitarian interventions, but may also be unintended and unanticipated. Some potential effects of food assistance provision are highlighted in the research questions (and in more detail in Section 6). Food assistance provision can, however, have multiple additional impacts on pastoralist populations. The scope of the review is not restricted to a specific range of possible effects. However, as with other aspects of the review, it may be appropriate to focus attention on particular effects as the review team anticipates a lack of literature reporting desired outcomes. Food assistance provision can have both short- and long-term effects on pastoralist livelihoods; depending on the availability of sources, the review will consider both types of potential impacts. The review will only address the potential impacts of food

assistance provision on pastoralist livelihoods; it will not consider other causes of changes in pastoralist livelihoods.

In sum, this review will consider all potential impacts of in-kind food assistance on all pastoralist populations which have been affected by humanitarian emergencies (of all types specified in the definition of crises in Section 4.1) in the period since 1967 (when the Food Aid Convention was negotiated). Food assistance interventions had taken place before 1967, although they had lacked the same legal basis. However, after the Convention was enacted, the procedures followed by providers of food assistance have over time become relatively standardized, allowing more effective comparison. Furthermore, the size of food assistance of interventions grew considerably in the next few decades, starting with a series of droughts which affected sub-Saharan Africa in the 1970s. This review will consider all potential impacts of in-kind food assistance on all pastoralist populations affected by humanitarian emergencies from 1967 onward. The comparator will be these populations prior to the emergency or other comparable pastoralist populations (e.g. pastoralist populations not affected by the emergency).

6. PICO PARAMETERS

The previous section alluded to the Population, Intervention, Control, and Outcome (PICO) parameters in the context of consideration of the scope of this review. This section formally identifies the PICO parameters of the review.

6.1. POPULATION

The review will consider all pastoralist populations which are experiencing or have experienced humanitarian crises. It will also investigate the commonalities and variation between the populations (primarily in terms of livelihood patterns, including migration practices, but also, where relevant, governance systems and interactions with non-pastoralist populations) in order to facilitate subgrouping and apt comparison, and thereby make causal inferences regarding provision of food assistance and livelihood changes.

6.2. INTERVENTION/ISSUES

The review will examine in-kind food assistance provision provided during or after humanitarian crises. To this end, it will identify humanitarian crises which have affected pastoralist populations. It will also provide an overview of food assistance interventions targeting pastoralist populations which have been undertaken in the wake of these crises. Specifically, it will aim to identify the issues, types of intervention, and the specific ways in which they have targeted pastoralist populations.

6.3. COMPARATOR/CONTEXT

The review will assess the changes that the livelihoods of pastoralist populations have undergone in the wake of in-kind food assistance provision, and the changes to the context where they live. The changes experienced by any relevant population will be compared to pastoralist populations (especially ones living in similar contexts) which have not, pastoralist populations which have received other types of food assistance (including cash transfers and vouchers), pastoralist populations which have been affected by different kinds of humanitarian crises (for example slow as opposed to rapid onset ones), pastoralist populations which have not experienced comparable humanitarian crises, and to the historical experiences of the same population.

6.4. OUTCOMES

The review will investigate potential impacts (detailed below) of in-kind food assistance on pastoralist populations. Whenever possible, evidence of possible impacts will be disaggregated by age, gender, mobility patterns, populations (such as ethnic groups) and regions of interest, the type of food assistance interventions, the type of humanitarian crisis in question (slow or rapid onset; natural in origin, man-made or a combination), and other relevant attributes.

The review will also consider the extent to which food assistance interventions are potentially responsible for specific changes in pastoralist livelihoods. These changes may include:

- Shifts in livelihood strategies, especially changed preferences for specific assets – animal species or (among agropastoralists) access to land for seasonal agricultural production – or diversification of strategies to include non-pastoral production and employment, as well as dependency on food assistance.
- Asset dynamics, including sale and acquisition of assets and asset types.
- Income dynamics, including new sources of income (for example from non-pastoral employment and remittances) and (re)distribution of income within populations.
- Shifts in mobility patterns, including sedentarization and urban migration.
- Shifts in social relations, including in social support networks.
- Household-level shifts, including related to household size, household income, distribution of assets, the role of household members in specific aspects of livelihood strategies (determined by age, gender, and other attributes), and household splitting.
- Individual-level shifts, such as acquisition of new skills, educational attainment, gender roles.
- Conflict and insecurity.

The review will identify the specific ways in which pastoralist livelihoods and related phenomena have changed and seek to determine the extent to which they can be associated with food assistance interventions. In particular, they will address the possible causal mechanisms that may link specific food assistance interventions and livelihood changes.

7. RESEARCH METHODOLOGY

The anticipated nature of available evidence dictates the choice of the methodological framework for this review. First, initial scoping suggests that most of the evidence is qualitative and will include both peer reviewed and non-peer reviewed (e.g. government/non-government) publications (including evaluations). Second, a full systematic review of evidence requires 'a well-defined question where appropriate study designs can be identified in advance' and 'aims to provide answers to questions from a relatively narrow range of quality assessed studies' (Arksey and O'Malley, 2005: 20). The lack of such studies on the subject of the review, the multiplicity of study designs, the relatively broad character of the question, and time constraints suggest that an alternative approach to evidence synthesis is appropriate.

To provide a transparent, robust, and reliable assessment of the state of knowledge, a scoping study methodology will offer the flexibility which this project requires. Scoping reviews share a number of the same processes as a systematic review as they both use rigorous and transparent methods to comprehensively identify and analyse all relevant literature pertaining to a research question (DiCenso et al., 2010). Unlike a systematic review, however, a scoping study can address broader topics and a wider range of study designs (Ibid.: 20). A scoping study is intended 'to map *rapidly* the key concepts underpinning a research area and the main sources and types of evidence available, and can be undertaken as stand-alone projects in their own right, especially where an area is complex or has not been reviewed comprehensively before' (Mays et al., 2001: 194; emphasis in original) and is, therefore, a particularly appropriate framework for this review. At the same time, much like systematic reviews, the scoping study methodology is underpinned by the requirement of rigorous and transparent handling of all stages of the research process, which should be documented to enable replication. A scoping study should identify all relevant sources regardless of study design as a standalone project (Arksey and O'Malley, 2005: 22).

This review will add to the traditional scoping study method by assessing study quality (quality assessment is not part of the method). Appropriate quality assessment tools based on study design and method of reporting as recommended by Daudt et al. (2013) will be used.

In all, we will seek to:

- Systematically identify all available evidence on the impact of food assistance to pastoralist livelihoods (during and after) a humanitarian crisis;
- Compare and contrast the effects of assistance delivered (by population, assistance type etc.);
- Qualitatively and (if possible) quantitatively synthesize identified data and concepts;
- Assess the quality of evidence, as appropriate;
- Identify gaps in the current evidence-base and further comment on future research needs in this space.

8. SEARCH STRATEGY

8.1. SOURCES AND DATABASES

Using the previously outlined PICO parameters, searches will be run in electronic databases, grey literature repositories, and on the websites of relevant organizations. Query strings will be based on the search terms outline in Appendix I. The review will rely on a comprehensive search strategy to identify sources in English or French. Because the review team members do not speak Arabic, Somali, or other languages in which (especially grey) literature on the subject matter of the review might have been written, such sources will be excluded from the search. Sources will include peer-reviewed journal articles, other academic sources (such as working papers), reports published by academic institutions (including Feinstein International Center reports on pastoralism), government institutions, international organizations and their specialized agencies, non-government organizations, as well as other types of grey literature.

Peer-reviewed publications will be searched through the following electronic databases:

- Africa-wide NiPAD BIOSIS Previews
- CAB Abstracts
- Cochrane Library
- EMBASE
- GEOBASE
- Google Scholar
- IDEAS
- International Bibliography of the Social Sciences
- LILACS
- MEDLINE
- PAIS International
- Social Sciences Citation Index
- Web of Science
- World-wide Political Science Abstracts
- Academic Search Premier (French)
- ARTFL-FRANTEXT (French)
- ArticleFirst (French)

The review team has already consulted and will continue to work with Ana Patricia Ayala, a librarian and information scientist at Robarts Library at the University of Toronto, to finalize the search strings for the electronic databases.

Grey literature will be searched through grey data repositories and on websites of relevant organizations. Grey data repositories, www.opengrey.org and www.greylit.org, will be searched using the same search criteria applied to the peer-reviewed databases. Searches of websites of relevant organizations will include:

- academic/research institutes: Addis Ababa University, Center for International Development, Feinstein International Center, FHI 360, Institute for Development Studies at the University of Nairobi, Institute for Global Health at University College London, Institute of Development Studies at the University of Sussex, International Institute for Environment and Development (IIED), International Livestock Research Institute at Makerere University, Overseas Development Institute, Oxford Policy Management, Twente University;
- government agencies: Danish International Development Agency (DANIDA), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), European Union Humanitarian Aid

and Civil Protection (ECHO), Swedish International Development Agency (SIDA), United Kingdom Department for International Development (DFID), United States Office of Foreign Disaster Assistance (USAID);

- international organizations and their specialized agencies: African Development Bank, Asian Development Bank, International Committee of the Red Cross, International Organization for Migration, Office for the Coordination of Humanitarian Affairs, Office of the United Nations High Commissioner for Refugees, United Nations, UNICEF, World Bank, World Health Organization;
- non-government organizations: Action Against Hunger, International Rescue Committee, Médecins Sans Frontières/Doctors Without Borders, Oxfam, Save the Children, Veterinaires Sans Frontières;
- private foundations: The Bill and Melinda Gates Foundation, The Clinton Foundation, The Gatsby Charitable Foundation, The Rockefeller Foundation.

Websites often have less advanced search capabilities than electronic journals. However, in order to ensure systematic character of the review, searches of websites will rely on the same search criteria as databases.

8.2. ELIGIBILITY CRITERIA

Inclusion criteria will be applied incrementally over the course of two screening rounds to identify potentially relevant publications. The criteria are derived from the PICO parameters used in the review. Two reviewers will independently apply the inclusion criteria to each study and at each round of review. A sample test of the inclusion criteria will be applied to a representative number of publications allowing for refinement of criteria and acceptable agreement (Cohen's Kappa >0.6) (Cohen, 1960). Upon completion of each round, the reviewers will discuss disagreements and, if a consensus cannot be reached, a third independent reviewer will be identified and asked to judge the relevance of the title(s)/abstract(s) or publication(s).

Citations will be imported in to the web-based bibliographic manager RefWorks 2.0 (RefWorks-COS, Bethesda, MD) and duplicate citations will be removed manually with further duplicates removed when found later in the review. Citations will then be imported into the web-based systematic review software DistillerSR (Evidence Partners Incorporated, Ottawa, ON) for subsequent title and abstract relevance screening and data characterization of full articles.

Round 1: Title and abstract review for relevance

In the first round of reviews, titles and abstracts of potentially relevant publications, identified during the searches, will be screened by two reviewers independently for further consideration if they satisfy the following inclusion criteria:

- Does the study reports a pastoralist population (Appendix 2)? (yes/no/unclear)
- Is the reported population affected by a humanitarian emergency in the period since 1967 or can be compared to a population which has been affected by a humanitarian emergency (a comparative population is desired, but not necessary for inclusion, given the suspected limited availability of data)? (yes/no/unclear)
- Did the response to the emergency include provision of in-kind food assistance? (yes/no/unclear)

Round 2: Full text review for relevance

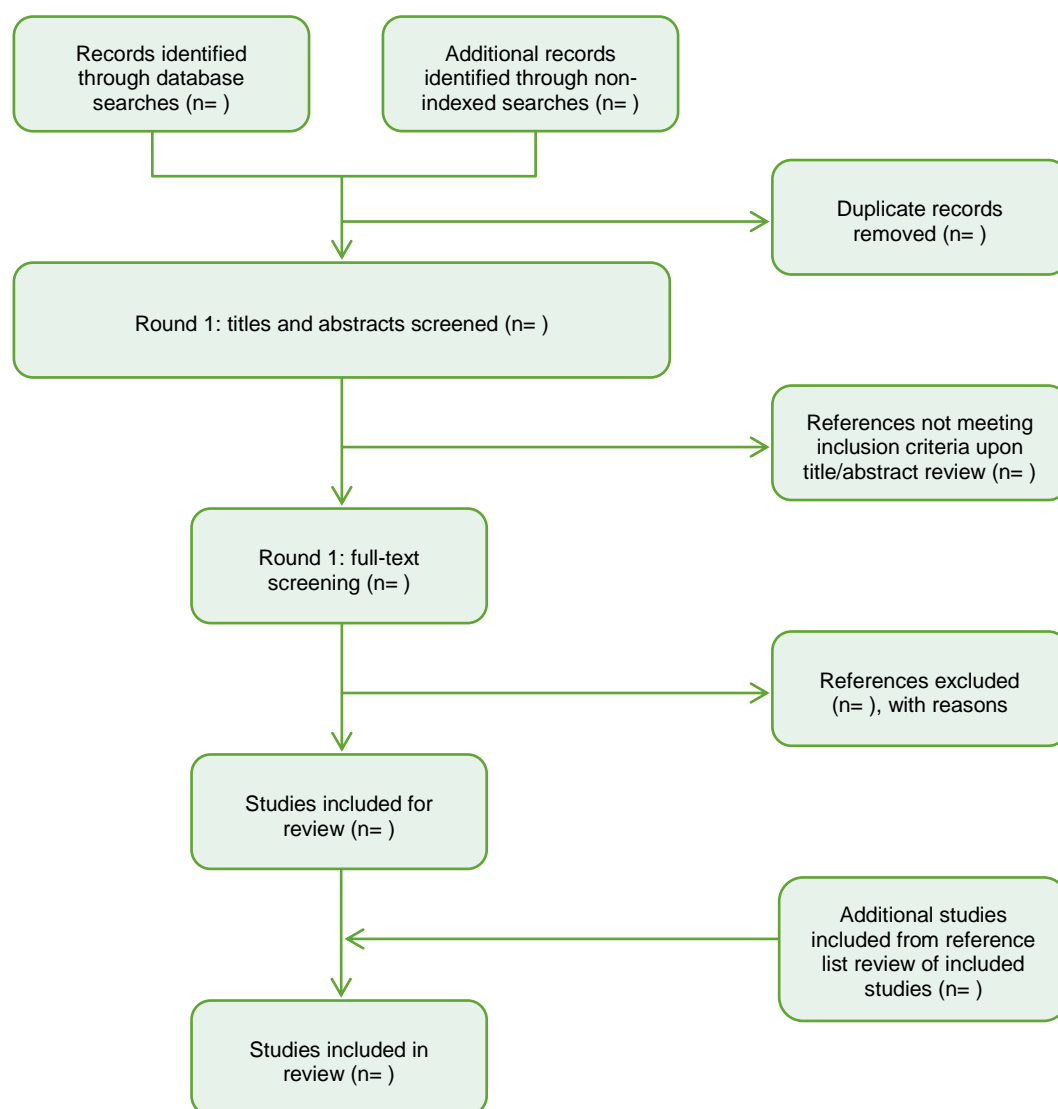
Studies that did not report 'no' in any of the inclusion criteria from round 1 will be included in round 2. In the second round, the reviewers will re-apply inclusion criteria from potentially relevant publications from round 1.

Studies included at this stage must also satisfy the following criterion:

- Does the study present evidence of potential impact (as defined in Section 6.4) of food assistance on pastoralist populations? (yes/no/unclear)

Studies which fail to meet the inclusion criteria during rounds one and two (i.e. fail to respond 'yes' to all inclusion criteria) will be excluded from the review. The references of all included publications will be reviewed to identify any potentially relevant publications missed in database searches. We will apply the same screening to these publications for inclusion. All inclusions and exclusions will be recorded in DistillerSR. The reasons for exclusion will be recorded in DistillerSR and exclusion criteria will be placed in a PRISMA flow diagram (Figure 1).

Figure 1. Publication exclusion flow diagram



8.3. DATA EXTRACTION

All included studies will proceed to data extraction. As with the application of inclusion criteria, pilot testing of a representative sample of studies will be conducted by two independent reviewers. Results of concurrent extraction will be compared to ensure that reviewers are extracting all available and appropriate data. During the data extraction process, multiple coding tool questions will be posed under the following subject headings:

- Publication details: year of publication, language of publication, country in which study was conducted;
- Study aims and rationale;
- Study type: e.g. peer-reviewed journal article, grey literature, impact evaluation;
- Study design: RCT, quasi-RCT, laboratory experiment, survey experiment, natural experiment, cross-sectional, cohort, case-control, case-crossover, case-case, case-case-control, case-cohort, case-only, case study, most similar system design comparative study, most different systems design comparative study
- Study methods: e.g. quantitative, qualitative, or mixed;
- Population: total population of concern, sample size, number and characteristics (including age, gender, mobility patterns) of members of pastoralist populations affected by humanitarian crises (before and after the crises), number and characteristics (including age, gender, mobility patterns) of members of pastoralist populations affected by food assistance interventions, number and characteristics (including age, gender, mobility patterns) of control groups;
- Type of food assistance intervention(s) described;
- Outcome measures: changes in livelihood patterns, livelihood strategies, asset dynamics, income dynamics, mobility patterns; household-level shifts, including related to household size, composition, income, internal distribution of assets and responsibilities; individual-level shifts, including acquisition of new skills, educational attainment, gender roles.

9. QUALITY ASSESSMENT

Procedures for carrying out the review have been explicitly defined in advance in order to minimize bias and random errors (Higgins and Green, 2011). As a result, they will provide a more transparent, robust, and reliable assessment of the state of knowledge than traditional, narrative reviews. The review will extend the scoping study methodology to include an assessment of quality-of-evidence.

Included studies will be subject to assessment of their quality. Studies will be divided into the following study types:

1. Those presenting causal impact data, i.e. impact evaluation studies, based on experimental and quasi-experimental design;
2. Those presenting associations or correlational impact data, based on non-experimental designs; and,
3. Those presenting process data, primarily observational and narrative studies (including evaluations).

The review team anticipates that the vast majority of studies will belong to the third type.

We will use the following tools to assess the quality of reported evidence: GRADE (experimental and quasi-experimental), Newcastle-Ottawa Scale (observational), CERQual (qualitative designs), and Quality Proforma (evaluations). Given the range of study types expected to be potentially relevant, we will select appropriate tools for assessment, which may not be directly comparable (an obvious limitation of this review).

10. SYNTHESIS METHODS

Data synthesis will prioritize studies reporting homogeneous quantitative outcomes of interest, with a particular emphasis on studies that report food assistance relative to a comparative population (e.g. compare the impact of food assistance on market access before and after a humanitarian crisis). If quantitative meta-analysis is possible for any research question/outcome, open source RevMan5

(www.tech.cochrane.org/revman/download) will be used to analyse data from a range of study designs and compared appropriately. Meta-analysis will be undertaken if a sufficient amount of data can be identified allowing for quantitative synthesis for pooled estimates of effect. Where appropriate, we intend to recalculate summary statistics for each study based on absolute numbers for each study and estimate a measure of effectiveness with 95 percent confidence intervals. Data will be presented for each relevant outcome. If data allows, we will also pool estimates of effectiveness of food assistance for each outcome of interest. Tests for heterogeneity will be performed (e.g. I^2) regarding composition of the population, slow/rapid onset crisis, protracted versus emergency, types of food assistance.

It is anticipated that few studies will report quantitative data. As such, thematic analysis will be used to assess the impact of food assistance and pastoralist lifestyles. Thematic analysis is a type of qualitative analysis in which the data are analysed to identify common or recurrent themes (Green and Thorogood, 2004). In scoping reviews, themes are interpretive ideas or concepts that describe or explain characteristics of included studies. Themes are defined according to research questions (outlined in Section 3). Subsequently, framework analysis will build on thematic analysis by summarizing and classifying themes within a thematic framework (e.g. diagrams and tables are going to be used to illustrate relationships between themes) (Ibid.).

11. EXPECTED CONCLUSIONS AND IMPLICATIONS

The review team anticipates that data contained in existing publications will make it possible to detect associations between provision of in-kind food assistance and a range of outcomes identified in Section 6.4. In some cases it may be possible to make plausible causal inferences about the relationships between provision of in-kind food assistance and these outcomes. More generally, the review will synthesize existing knowledge and highlight remaining gaps and limitations of the evaluated publications – performing an agenda-setting function for future research. As such, it will present a broader picture of provision of in-kind food assistance to pastoralist populations in the context of humanitarian crises and, therefore, help to detect patterns and themes which emerge from consideration of available literature.

12. APPENDICES

APPENDIX 1: SEARCH TERMS

Population:

- Pastoral* / agr*pastoral*
- Nomad* /transhuman*

Intervention:

- Drought
- Climate change / global warming
- Disease
- Conflict / insecurity
- Displace*
- Humanitarian cris* / humanitarian emergenc*
- Food aid / food assist*
- In-kind food aid / in-kind food assistance / food distribution / food for assets / food for work

Outcomes:

- Impact* / consequence* / effect* / outcome* / result*
- Asset shift* / asset change*/ livestock / herd size
- Asset preference shift* / asset preference change*
- Asset dynamics / asset sale* / asset acquisition
- Income dynamics
- Mobility change* / sedenteri*ation / urban migration
- Household size change*
- Household income change*
- Distribution of assets change*
- Household member* role / age / gender
- Household splitting
- Skills acquisition
- Education* attainment
- Gender role change*
- Natural resource* management / Rangeland change*

APPENDIX 2: PASTORALIST POPULATIONS

A. Regional zonation of pastoral systems

Zone	Main species	Status
Sub-Saharan Africa	Cattle, camels, sheep, goats (shoats)	Reducing because of advancing agriculture
Europe	Small ruminants	Declining everywhere because of enclosure and advancing agriculture
North Africa	Small ruminants	Reducing because of advancing agriculture
Near East and South- Central Asia	Small ruminants	Declining locally because of enclosure and advancing agriculture
India	Camels, cattle, buffaloes, sheep, goats, ducks	Declining because of advancing agriculture, but peri-urban livestock production is expanding
Central Asia	Yak, camels, horses, sheep, goats	Expanding following decollectivization
Circumpolar zone	Reindeer	Expanding following decollectivization in Siberia, but under pressure in Scandinavia
North America	Sheep, cattle	Declining because of increased enclosure of land and alternative economic opportunities
Central America	Sheep, cattle	Declining because of increased enclosure of land and alternative economic opportunities
Andes	Llamas, alpaca, sheep	Contracting llama production because of expansion of road systems and European-model livestock production, but increased alpaca wool production
South America	Cattle, sheep	Expanding where forests are converted to savannah, lowlands but probably static elsewhere

From: FAO n.d.

B. Partial list of pastoralist populations

- Afar
- Ahir
- Aromanians
- Aymara
- Baghelmainly
- Bakarwal
- Bedouin
- Beja
- Berbers
- Bharwad
- Bhutia
- Bodla
- Charan
- Chishti
- Dhangar
- Dodoth
- Fula
- Gaddi
- Ghosi
- GujjarJie
- Karimojong
- Komi
- Kuchis
- Kurma
- Kuruba
- Maasai
- Maldhari
- Navajo
- Oromo
- Pokot
- Quechua
- Rabari
- Raika
- Ranghar
- Rendille
- Saho
- Samburu
- Sami
- Sarakatsani
- Somalis
- Tigre
- Toubou
- Tuareg
- Turkana
- Tuvans
- Wattu
- Yörük

APPENDIX 3: TIMELINE

	Start date	End date	Time (in weeks)
Finalizing the title and signing the contract	13 January 2016	13 January 2016	
Preparation of protocol	14 January 2016	3 March 2016	7
Review of protocol	4 March 2016	24 March 2016	3
Mapping of networks for research uptake	4 March 2016	24 March 2016	"
Revision of protocol	25 March 2016	7 April 2016	2
Running the search terms	8 April 2016	28 April 2016	3
Screening of abstracts and titles	29 April 2016	5 May 2016	1
Assessment of full-text studies	6 May 2016	19 May 2016	2
Extraction of data and evaluation of risk of bias	20 May 2016	26 May 2016	1
Synthesis, incl. statistical meta-analysis where appropriate	27 May 2016	9 June 2016	2
Preparation of draft report and plain-language summary	10 June 2016	23 June 2016	2
External review of draft report (allow six weeks)	24 June 2016	4 August 2016	6
Revision of draft report	5 August 2016	18 August 2016	2
Publication of final report and plain-language summary	Late August 2016		

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