

Knowledge management and research for resilience in the Drylands of the Horn of Africa

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BRIEF 5

Knowledge management and research for resilience in the Drylands of the Horn of Africa

Technical brief prepared by the Technical Consortium for Building
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Abbreviations

ASAL	arid and semi-arid lands
AU	African Union
CAADP	Comprehensive Africa Agriculture Development Program
CaLP	Cash Learning Partnership
CCA	climate change adaptation
CELEP	Coalition of European Lobbies for Eastern African Pastoralism
CLA	collaboration, learning and adaptation
CSO	civil society organization
DEWS	drought early warning system
DfID	UK Department for International Development
DRM FSS	Disaster Risk Management and Food Security Sector
DRR	disaster risk reduction
ECB	Emergency Capacity Building Project
ECHO	European Commission Humanitarian Aid and Civil Protection Department
ELMT	Enhanced Livelihoods in the Mandera Triangle
ELSE	Enhanced Livelihoods in Southern Ethiopia
FAO	Food and Agriculture Organization
FSD	Foundation for Sustainable Development
HoA	Horn of Africa
HoAPN	Horn of Africa Pastoral Network
IBLI	Index Based Livestock Insurance
ICPALD	IGAD Centre for Pastoral Areas and Livestock Development
ICRC	International Committee of the Red Cross
IDDRSI	IGAD Drought Disaster Resilience and Sustainability Initiative
IDS	Institute for Development Studies
IFAD	International Fund for Agricultural Development
IGAD	Intergovernmental Authority for Development
IGAD LPI	Intergovernmental Authority for Development Livestock Policy Initiative
IIED	International Institute for Environmental Development
IIRR	International Institute for Rural Reconstruction
ILC	International Land Coalition
ILRI	International Livestock Research Institute
IUCN	International Union for the Conservation of Nature
KARI	Kenya Agricultural Research Institute
KASAL	Kenya Arid and Semi-Arid Research Program
KM	knowledge management

LEGS	Livestock Emergency Guidelines and Standards
LPI	Livestock Policy Initiative
M&E	monitoring and evaluation
MNKOAL	Ministry of Northern Kenya and other Arid Lands
MS-TCDC	MS Training Centre for Development Co-operation
NDMA	National Drought Management Authority Kenya
NEPAD	New Partnership for African Development
NGO	non-government organization
P-Fim	People First Impact Method
PLI	Pastoral Livestock Initiative
PMU	Program Management Unit
PRIME	Pastoralist Areas Resilience Improvement and Market Expansion
REC	Regional Economic Communities
REGLAP	Regional Learning and Advocacy Program
UN	United Nations
UNDP DDC	United Nations Development Program Drylands Development Centre
UNEP	United Nations Environmental Program
USAID	United States Agency for International Development
VSF	Veterinaires Sans Frontieres
WISP	World Initiative on Sustainable Pastoralism

Terms

Drylands	land areas of the world in which the moisture regime values fall in the range of 0.03-0.65 on the AI (Aridity Index) and the LGP (length of growing period) falls within 90-180 days.
Horn of Africa	for the purposes of this paper, the Horn of Africa countries are as follows: Djibouti, Eritrea, Ethiopia, Kenya, Somalia, South Sudan, Sudan and Uganda.
IGAD	The Inter-governmental Authority on Development, a regional economic community comprising the following eight Member States: Djibouti, Eritrea (suspended), Ethiopia, Kenya, Somalia, South Sudan, Sudan and Uganda
RECONCILE	Resource Conflict Institute based in Nakuru, Kenya
Share Fair	An interactive event that employ various knowledge sharing formats such as market stalls and booths, posters and presentations designed to encourage sharing of experiences and discussion.
Wiki	A web application that allows people to add, modify or delete content in collaboration with others
Writeshop	A workshop with a range of relevant stakeholders – along with desktop publishing specialists – to produce a publication in a very short time

Executive summary

Knowledge management (KM) is best defined as “enabling individuals, teams and organizations to collectively and systematically create, share, learn and apply knowledge to better achieve their objectives”¹. KM is thus essentially a structured process of learning, for action among relevant stakeholders that is based on access and use of knowledge.

In the drylands of the Horn of Africa (HoA), this learning process should focus on supporting the primary users of information, dryland dwellers (particularly the most vulnerable), to use knowledge to promote their sustainable development goals and livelihood resilience. It should also focus on aiding those secondary or intermediary users (i.e. local government, extension services, change agents, researchers, etc.) who directly and indirectly support the primary users. These supporting partners can contribute by developing coherent and co-ordinated strategies to promote community and government capacities, and by engaging with the primary users based on their articulated priorities, to ensure that the knowledge generated and the ways in which that knowledge is communicated is responsive and enhances capacity to apply it. This is a major challenge for future knowledge management efforts in the region, as there has heretofore been little experience in this domain and weak focus on the primary users.

Knowledge management is an evolving knowledge-for-development approach. As such, there is still much work required to create functional and synergistic

co-learning and knowledge-sharing platforms that can be used by decision makers from local to regional levels to enhance a resilience agenda in the drylands. This paper reviews numerous existing, relevant knowledge management activities and experiences that are associated with components of the knowledge management process, including: identifying knowledge needs, gathering and synthesizing knowledge, communicating knowledge and promoting the application of knowledge. An important area within the knowledge management learning process that requires channelled support is strengthened governance: the increased capacity of communities (and the most vulnerable within them) to access, use and add value to knowledge, to advocate that knowledge to decision makers and to hold duty bearers accountable in supporting positive change.

A functioning knowledge management system will require the full collaboration of the donor and investment community, public and private sector, the research community, development and humanitarian partners, male and female farmers, pastoralists, fisherfolk and their communities. The ‘proof of purchase’ of the Knowledge Management approach to be put in place for the HoA will be demonstrated by increased resilience - positive change on the ground - that results from a synergistic integration of intrinsic knowledge and practical experience, research outputs, enhanced capacity and co-learning, changes in decision-making processes and supportive policies.

¹ <http://www.knowledge-management-online.com/what-is-Knowledge-Management.html>

Background and introduction

Many of the institutional, economic, social and ecological problems of the HoA's drylands are to some degree associated with ineffective knowledge management. These regions have suffered decades of neglect, political marginalization and the undermining of indigenous knowledge and traditional mechanisms of self-organization, along with a lack of appropriate education, information provision and capacity-building support. Policy makers and practitioners have often based their interventions on a series of myths and misconceptions, due to a lack of local understanding regarding dryland livelihoods and ecosystems and how to work with the associated knowledge. This is exacerbated by the notion of, or the desire for, a 'one size fits all' mode of governance. Misperceptions that mobile livestock keeping is backward rather than resilient, that the drylands are wastelands and that herd management methods are illogical, have all led to ineffective and often damaging potential sustainable development. These myths continue today with the implementation of interventions that ignore the integrity of the dryland socio-ecological system and continue to advocate for converting rich water-resource areas to crop production, without understanding the subsequent implications on pastoral systems.

Poor development of the dryland areas is further exacerbated by the influence of political considerations on policy-making processes, rather than a robust evidence base of priorities and needs. As a result, compared to those parts regarded by political bodies as 'high-value', the drylands lack education, information, basic infrastructure, access to and control of resources and governance to development - despite universal evidence of the importance thereof. Furthermore, the over-emphasis

on relief and short-term interventions in these areas has not allowed an in-depth understanding of the underlying causes of vulnerability to form, nor allowed those causes to be addressed. There has also been little attention to strengthening-associated institutional learning.

The resilience debate provides an opportunity to address some of these issues, if appropriately framed and acted upon. According to a recent United States Agency for International Development (USAID), the UK Department for International Development (DfID) and a World Bank discussion paper (TANGO 2012), the principles of resilience programming include a focus on government and community ownership, a commitment to integrated and multi-sector approaches to development and humanitarian work, and an emphasis on systems thinking - including both ecological and social systems. However, by embracing these complex dimensions simultaneously, the resilience concept presents additional challenges and demands for achieving effective knowledge management.

This paper sets out to explore the issues around knowledge management - what it is and how it might be applied, particularly with a view to enhancing resilience in the Horn of Africa and contributing to the improved impact of interventions and activities. This is not a comprehensive review, nor can it be considered a definitive work on knowledge management. The paper seeks to present some of the existing views and opinions on knowledge management and its role in the HoA and to inform the on-going knowledge management activities supported by the Intergovernmental Authority on Development (IGAD) and the Global Alliance.

Knowledge management and research concepts

The Knowledge Management Pyramid

The knowledge management pyramid, based originally on Ackoff's hierarchy described in an address given in 1988 (Ackoff 1989), can be viewed as being made up of, and distinguishing between, the contributions of data, information, knowledge and wisdom - or DIKW (Figure 1). DIKW also reflects a range of lifespans, short to permanent.

When discussing knowledge management, it is important to recognize that not all data or information leads to greater knowledge and, similarly, not all knowledge leads directly to wisdom. The human and institutional dimension, and the way in which the components are accessed and interacted upon, are not realized through a linear relationship as depicted. Instead, the pyramid helps to distinguish the increased understanding of relations, patterns and principles moving up to wisdom (Béla 2010; Frankenberger et al. 2012).

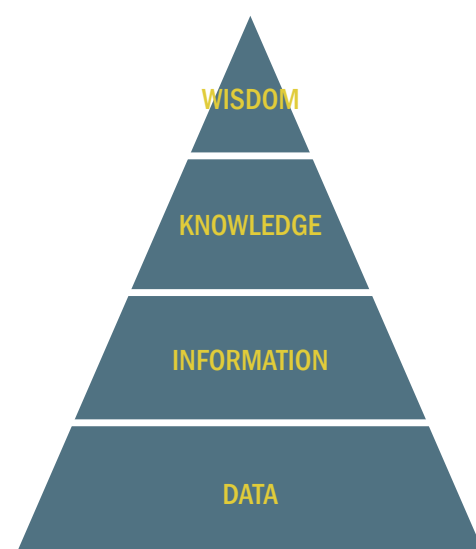
Data are discrete, objective facts that need to be interpreted to provide information, resulting in messages intended to change perceptions. Similarly, information (the "what") has to be applied to a context and infused with experience and values, for it to become knowledge (the "how"). Wisdom is the judicious application of knowledge and represents an appreciation for the different facets of a given situation, as well as a deep understanding thereof. Wisdom allows for the application of perceptions, judgments and actions, in keeping with this understanding.

In the dryland areas, there are major gaps in the data necessary to inform our understanding of the

current situation. This is partly due to the cost of collecting data in remote and inaccessible areas, but is also because data collection methodologies are developed for accessible, sedentary populations and have not been adapted to dryland environments with mobile peoples and assets. As can be seen from reviews of key statistics in the area² (Annex 1), there is much incomplete, out-dated and conflicting information - particularly with regard to critical statistics for planning, including human and livestock population numbers, the proportion of households engaged in different livelihoods and how these are changing over time.

There is, however, a lot of general information on the Horn of Africa that can be found on websites,

Figure 1. The knowledge management pyramid (DIKW)



² See Annex 1: REGLAP's overview of key statistics on dryland areas in Ethiopia, Kenya and Uganda

bibliographies and in summaries of existing information³, but that is not well supported by robust evidence or practical application and experience. A more urgent concern for knowledge management in the region is that, even when data and information are available, it is either not used because the user lacks the capacity for converting information to knowledge for particular dryland contexts, or there has been little opportunity to apply the knowledge in a coherent and meaningful way.

The Knowledge Management Process

As illustrated in Figure 2, knowledge management is a process of identifying, gathering, synthesising and sharing knowledge as well as promoting its application. Information and data management feed into this process at each stage, but are not sufficient to ensure that the desired change is realised. Knowledge management is considered most effective when the primary users (i.e. individuals and communities) are integral to this process.

The process of knowledge management includes the following sequentially occurring processes:

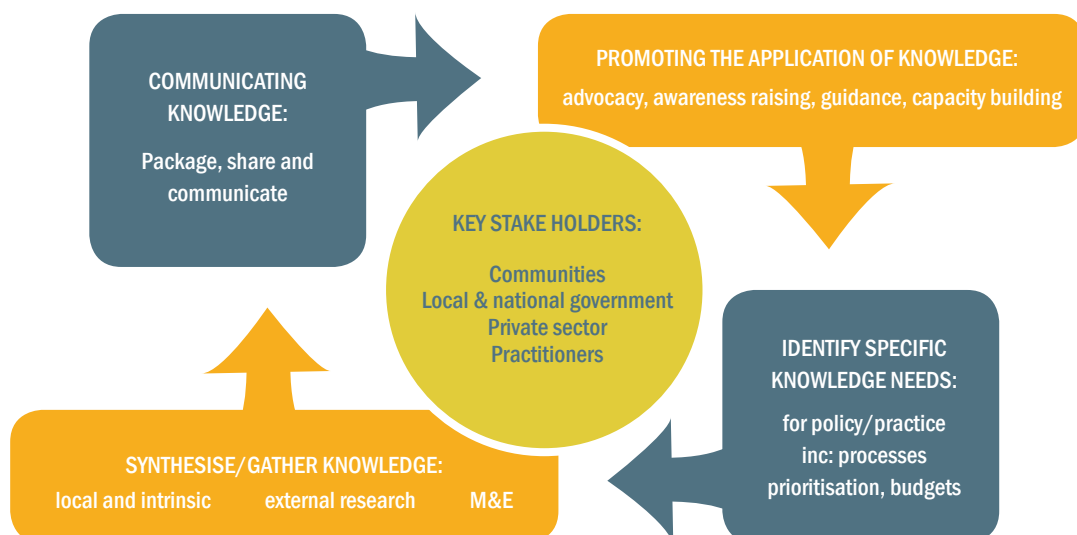
1. Promoting the application of knowledge.

This requires the capacities and the opportunities to apply knowledge. Both are often lacking in the HoA's drylands, causing limited progress and impact despite strong evidence on the development interventions that are working or missing in dryland areas.

2. Communicating knowledge.

Effectively communicating knowledge depends on knowing one's audience, to ensure that appropriate knowledge is communicated in the most efficient way. Communication should be succinct, focused and practical enough for different contexts and audiences. Technological improvements have vastly increased the volume of information available and improved the means of sharing that information. But as key information users become increasingly overwhelmed by the amount of information or receive conflicting messages, discerning and distilling available information is essential. To encourage the sharing and application of useful information and knowledge requires that budgets, processes and policies be in place for donors and governments.

Figure 2. The Knowledge Management Process



³ See Annex 2: REGLAP's key reference documents on dryland resilience

3. Synthesising/gathering knowledge.

Given the vast amount of information, it is only feasible to synthesize and gather knowledge for very specific needs and purposes. More importantly, primary users must be skilled to do this themselves in a systematic fashion through their on-going activities. Encouraging users to recognise the importance of intrinsic knowledge, in the form of insights and learning through experience and wisdom, is vital to enhancing the value, accessibility and relevance of data and information. In addition, the understanding of the role that current data plays

in the setting of priorities and budget allocation is often lacking, yet it is critical in promoting and achieving a greater return on investment.

4. Identifying specific knowledge needs.

Only through the application of knowledge, can the key user identify what they know and do not know. Thus, knowledge needs can only be identified by knowledge users as they try and promote their goals. However, this process of identifying needs should be better tracked so that knowledge holders and developers can respond.

Knowledge Management in the Drylands of the Horn of Africa

Promoting the application of knowledge

In policy and practice, this is by far the most neglected area of knowledge management and requires greater attention in developing capacity and creating opportunities for the use of knowledge.

For policy making and implementation

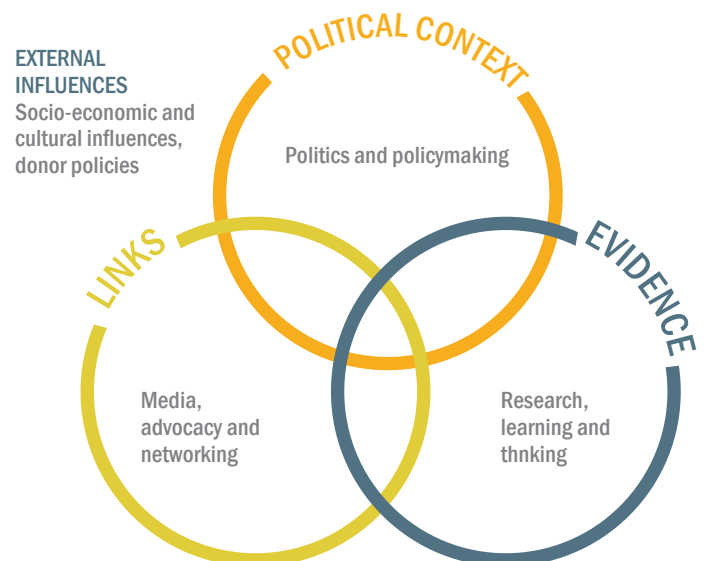
Policy-making is often influenced by political/power interests, so that the provision of information or evidence alone will not have an impact. For example, while evidence on the economic potential of pastoralism is readily available to governments and policy makers in the region (Behnke 2010, 2011; Behnke et al. 2011; Kratli et al. 2013), there still remains an overriding policy thrust of settlement and land allocation to foreign investors, particularly for the production of commodities such as cotton and sugar. In Kenya, despite lobbying by civil society organizations (CSOs), the Veterinarian Association was able to push through the Veterinary Surgeons and Veterinary Para-Professionals Bill (2011)⁴ that made community animal health workers illegal and left most of the drylands without any form of animal health service provision.

It is therefore critical to improve knowledge about policy-making processes and events, and to develop the capacity to analyse policies in various contextual dimensions. This can then be used to empower communities, and to enable their defenders and decision makers to engage in and apply evidence-based advocacy and decisions. Such empowerment becomes increasingly important in the context of wealth disparity and diverse interests within the drylands, as outsiders exploit its natural resources

and economic opportunities. As can be seen from the RAPID framework (ODI 2004) in Figure 3, there is a need to better link research to policy making processes via advocacy and networking support.

One way of safeguarding the better use of knowledge in policy-making processes, is to ensure that draft policies are publically accessible. Despite public commitment to consultation, governments and indeed many development partners rarely release information on what stage policy processes are in. Instead, policy documents are increasingly only made public once they are final – as can be seen with the country program papers of the IGAD Drought Disaster Resilience and Sustainability Initiative (IDDRSI) process that were not released by several member states until final. Several other policies in the region (e.g. the pastoral policy/

Figure 3. The RAPID framework



⁴ See Abebe D, Leyland T, Lotira R. 2013. *Evaluation of Community Animal Health Delivery Systems in South Sudan*. OFDA. Kenya, Ethiopia.

code in Uganda) have not been made public, nor has information about the process been released. Instead, it is suggested that the United Nations (UN) and regional economic communities (RECs) who partner with and support governments should promote increased transparency and model desirable practice in their own work. As policy documents are often written in legalistic language, there is also a need to synthesise the implications and key issues for different groups in order for them to be easily understood and engaged with.

There is potential to improve the promotion of knowledge application through the changing policy-making environment in the HoA. For example, under the new Kenyan Constitution, parliament will have a much greater role in policy-making that will necessitate an increased focus on parliamentarians, rather than technocrats in policy advocacy. Subsequently, county governments will have increased power to develop local legislation. Ideally, policies would be analyzed in collaboration with the stakeholders who are influenced, with a focus on the capacity for the policy to address root causes while clarifying the cultural, social, economic and environmental implications.

For practice

Once good practice guidance has been developed, there is a need for raising awareness, implementing training programs and ensuring that donors promote its incorporation in proposals and programs. Although there are a number of learning and capacity development programs (such as CaLP⁵ and ECB⁶), very few focus specifically on dryland communities or explicitly incorporate dryland issues.

NGOs with a particular focus and interest in the dryland areas are those that tend to be engaged in discussions and learning groups on good practice. In the case of Livestock in Emergency Guidelines and Standards (LEGS), for example, half-day awareness sessions have been used to sensitize management staff of external organizations, including those at headquarter level, who are then encouraged to send their field staff on the training.

Methods

Many of the methods for communicating knowledge can also develop capacities for greater

use, especially if they are focused on how to put knowledge into practice.

Capacity building/empowerment processes

Community development processes that are facilitated by a skilled facilitator/community worker are often the most powerful method of promoting the use of knowledge with communities, as the facilitator can develop capacities, mentor and act as an intermediary.

Training

Training (including workshops) can ensure devoted focus on issues, away from the distractions of daily life, and can be particularly good for developing capacities to apply knowledge, rather than relying solely on information dissemination which can be performed more efficiently in other ways. For example, the LEGS training provides practical exercises on how to navigate the course handbook and apply the guidance and tools within it rather than simply disseminating the content⁷.

Face-to-face events have the obvious additional benefits of building relationships and trust between participants who have not previously worked together, and promoting networking for the future sharing of information and insights.

While it is important to ensure training reaches community representatives, front line agencies and government extension personnel, training sessions may need to be shortened and focused in order to maintain the presence of key decision makers such as high-level government officials, as it is often challenging to obtain their participation in such training sessions for an extended period of time due to their busy schedules.

Working/learning groups and task forces

Working groups are a useful way of bringing different actors together for sustained engagement on a particular area of interest. Such groups allow reflection and practical application between interaction, and their success often depends

⁵ See <http://www.cashlearning.org/>

⁶ See <http://www.ecbproject.org/>

⁷ See: Practical Action, (2009). *Livestock Emergency Guidelines and Standards*. Practical Action Publishing. Warwickshire. UK

on their leadership, networking ability, effective management and the common interest they provide. For example, under Enhanced Livelihoods in the Mendera Triangle (ELMT), the Natural Resource Management Technical Working Group in Ethiopia was effective in bringing researchers and practitioners together largely due to the respect and the networking ability of its role in leading this group (Nicholson 2010).

Learning visits and routes

It is particularly useful for decision makers to experience the realities of dryland communities through exposure and dialogue. To encourage these activities, opportunities must be created for decision makers to listen, gain insights, explain and then obtain feedback from communities on how the decision makers are acting on the communities' behalf. It is not always possible for high-level decision makers to travel to the more remote areas, for the length of time needed to ensure a genuine understanding and engagement with communities and the diverse groups within them. It is therefore important that agencies empower front-line staff to engage in inter-agency action with local government and community groups, and to then support the outcomes of such actions.

It can also be difficult to assess the impact of high-level visits, although some learning visits do develop action plans and follow up mechanisms, such as the International Land Coalition/International Fund for Agricultural Development (ILC/IFAD) Learning Route. If well executed, these learning routes can provide decision makers and investors with first hand exposure to field realities and community perspectives.

Knowledge platforms and programs

Although there are no clear definitions as to what a knowledge management platform is, examples from the region and beyond suggest that it is a space created for different types of organizations to generate and share knowledge - usually through websites, e-groups, workshops, share-fairs and joint research, among others.

For example, the United Nations Environment Program (UNEP) Asia Adaptation Knowledge Platform claims to help *“developing countries in the region by building bridges between initiatives, researchers, policymakers, business leaders, and*

those working on climate change adaptation ‘on the ground’. The overarching goal of the Adaptation Knowledge Platform is to strengthen adaptive capacity and facilitate climate change adaptation in Asia at local, national, and regional levels. It focuses on three pillars:

1. *establishing a regional system for sharing knowledge, making it easy to understand and available to those who need it;*
2. *generating new knowledge that national and regional policymakers can use as they plan for climate change; and*
3. *promoting the application of new and existing knowledge.”* (UNEP 2013)

The impacts of such initiatives at a regional level should be carefully reviewed, as they do not address all aspects of knowledge management in the drylands of the Horn of Africa and have little potential to respond to communities' knowledge management needs.

It is suggested that a variety of programs on different issues with different actors be supported and interlinked within the region to promote better knowledge management, rather than a single program or platform. These platforms could together become a Community of Practice on Resilience for the Horn of Africa.

Communicating knowledge

Synthesising, packaging, and disseminating information on the drylands has improved considerably in recent years. However, challenges still remain in getting critical information and knowledge to the appropriate people in the appropriate form, and particularly in sharing information with communities and local government. The key challenge is to understand the audience and choose the information, tools and languages that enable an appropriate response to the audience's context and needs. Again, a close relationship with the end users is key, but consulting people who have experience with these requirements is also helpful.

In all cases, capacity development to understand and analyse the implications of new information is important. In relation to promoting information for policy-making and implementation, different types

of information are necessary at different stages – depending on the positions of those involved and what is likely to influence them. Briefs giving options in the earlier stages of policy making are useful, while later in the drafting process more specific recommendations (including language recommendations) may be required.

Packaging information

Briefs

Although the increased use of summary, technical and policy briefs has helped highlight key findings and issues, there is still room for improvement:

- Policy briefs may not be specific or contextual enough to be actionable;
- Technical briefs on approaches may lack evidence or potential for replication and may be too detailed or not locally informed for communities or local government who may need shorter, accurate contextual information;
- Summaries of studies may lack practical recommendations on the use of its findings;
- Policy documents are often written in legal language, motivating a need for analysis briefs that highlight the key concerns and implications of legislation on different groups within the drylands to promote advocacy and engagement. There is also a need for more information on the status of draft policies and their progress.

Good practice bibliographies, principles and guides

Although there are increasing amounts of ‘good practice’ documentation, few are comprehensively and independently evaluated or tested, often being used as a public relations tool rather than for learning and critical reflection. LEGS, which combined rigorous impact assessment with clear decision-making tools⁸, could readily be used as a model for future guidance.

Studies and reports

Most organizations are only prepared to share final, positive and ‘approved’ studies. This limits knowledge sharing and learning, and precludes input before outputs are finalised. More wikis and consultative processes on draft documents would enrich information and promote ownership and interest. Writeshops or reviews with stakeholders are a specific tool for encouraging this.

Furthermore, organizations and donors should reward self-critical reflection and provide incentives to share. For example, a highly negative report on NGO interventions in Haiti produced by People First Impact Method (P-FiM) was only widely shared after a high-level minister congratulated the NGOs involved for their honesty in the report⁹.

Community feedback

Often, studies do not plan feedback mechanisms for the communities involved. P-FiM impact assessments repeatedly highlight the drylands communities’ desire for information and that even basic information about critical issues (such as livestock diseases) is not accessible (P-FiM 2013). Feeding of information to local actors, such as local government and other local duty bearers, is also weak. This represents a critical loss in the potential to improve the accuracy of information and promote its use; therefore community feedback should be encouraged by donors and via data-sharing protocols - particularly the sharing of community plans and priorities facilitated by NGOs for that purpose.

Disseminating information

Forms of dissemination have to be chosen carefully as some dryland areas in the region still have no mobile coverage or vernacular radio¹⁰. Promoting information infrastructure development while exploring the use of additional dissemination forms (such as drama and world space radios) should be considered.

Local information resource centres have not always had the resourcing or the sustained support to make

⁸ See Watson C. and Catley A. 2008. *Livelihoods, livestock and humanitarian response: the Livestock Emergency Guidelines and Standards*. HPN network paper.

⁹ Gerry McCarthy, P-FiM, personal communication

them successful; however they can be creatively designed to ensure that dryland communities are still able to access the wealth of information available via the internet and other sources. A practical option for pastoral communities would be to have resource hubs associated with trade markets or slaughterhouses.

If carefully used, mechanisms for disseminating information have the potential to generate and enrich knowledge. A greater use of the internet in the form of wikis and online consultation could promote ownership and enrich content for those who have reliable access, although other mechanisms should be designed for those who do not.

Websites

Most organizations have their own websites for disseminating their information. Those that specialize in dryland information include: World Initiative on Sustainable Pastoralism (WISP); Tufts University; ELMT; Kenya Agricultural Research Institute (KARI); Kenya Arid and Semi-Arid Research program (KASAL) and International Livestock Research Institute (ILRI).

In some cases, there is a lack of attention to systematic uploading. Donors need to ensure that their grantees continually share and update information generated by their funds and there should be more efforts by all agencies to do this. While it is recognised that books and academic journals need to cover costs, special arrangements should also be made to ensure that the subjects of research can access the research information, particularly in developing countries.

There are some attempts at combining different information sources in order to provide more in-depth information, such as the Regional Learning and Advocacy Program (REGLAP) and Coalition Of European Lobbies For Eastern African Pastoralism (CELEP). However, these are not comprehensive and not always easy to navigate with poor search facilities and limited thematic organization¹¹.

E-bulletins and social media

There are an increasing number of e-bulletins that combine sources of information on the drylands of the Horn of Africa, such as the WISP, FAO's Disaster Risk Reduction website and United Nations Development Program Drylands Development Centre (UNDP DDC). However it is unclear how useful this form of communication is, given the continual updates required on new studies and events and given the limited on-the-ground impact of this information.

Social media increases the possibilities for targeted information dissemination and should be further explored and monitored.

E-discussions

While the quality of the interaction depends on generating interest of critical informants and incentives to share, e-discussion groups still have the potential to bring together practitioners, policy makers/advocates and researchers from across the world, to discuss specific issues. Probably the most dynamic and sustained interactive forum has been the CELEP e-list¹² which includes a wide range of practitioners, researchers and lobbyists who share and comment on information on East African pastoralism. Useful technologies for e-discussion and group information sharing and exchanges (such as Dropbox and wikis) are becoming more accessible and accepted.

Workshops/writeshops

Focused workshops have the ability to bring key people together for more sustained engagement, but depend on clear objectives and good targeting, organization and facilitation. They can also be useful in generating knowledge and interest on particular issues. For example, the Futures Agriculture Consortium workshop on the Future of Pastoralism¹³ helped enrich and promote the subsequent book: 'Pastoralism and Development: Dynamic Change at the Margins' (Catley et al. 2012). However, it is important that increased focus is given to 'discussion among pastoralist communities' rather than the standard 'discussion about them'.

¹⁰ See *Strengthening information dissemination at community level: A Disaster Risk Reduction and Early Warning Information Perspective, a report to the Kenya Rural Development Program/ASAL DM*. 2012

¹¹ See www.celap.info and www.disasterriskreduction.net/reglap

¹² See www.celep.info

Writesshops are another way to generate knowledge by combining different perspectives and sources of information, and to promote consensus and common understanding. They can be time-consuming and need to be carefully organized and facilitated. The drought cycle management publications that were produced out of the International Institute for Rural Reconstruction (IIRR)/Cordaid writeshop were instrumental in developing and promoting this approach (IIRR et al. 2004).

Synthesis and gathering of knowledge

Data and information collection in dryland areas face a number of challenges. These areas are often extremely remote, sparsely populated and are increasingly diverse both within and across communities. Some livelihood groups are mobile (sometimes across national borders) and close community and clan ties mean that household units are not as discernible as they are in other contexts, with animals and other resources frequently shared or lent out.

This complexity of relationships underlines the need for a depth of local knowledge and direct communication with communities, as well as the assessment of dryland communities against internal criteria. For example, measurement surveys may assess living standards by an external criterion such as quality of housing, which is not as important for pastoralists as it is for settled populations.

Economic data for pastoral areas is also lacking and again hard to collect, as the informal livestock trade which forms the backbone of pastoral economies does not include standardized mechanisms to monitor herd size or mortality rates, that continually fluctuate due to drought or disease. These data are often not combined with land use/land cover change, weather patterns, or feed availability, etc.

The economic potential of pastoral production systems is increasingly recognised but, again, difficult to quantify. A logical approach would engage pastoralist communities in defining appropriate

mechanisms, and thus ensure a detailed dialogue in issues directly affecting their lives and livelihoods.

With indigenous knowledge typically undervalued, community perceptions are not often gathered genuinely, systematically and in a disaggregated fashion. Organizations often collect information in ways that support or rationalize their agendas – such as carrying out needs assessments geared to what assistance the organization can provide, or evaluations focused on organizational activities. There are rarely discussions where communities express their honest opinion about their priorities and activities¹⁴ (REGLAP 2013a). Due to excuses of remoteness and communication in non-local languages, often only leaders or ‘pastoral elites’ are consulted (Bayer et al. 2002). Poor general education provision and increasing disparities between rich and poor dryland dwellers, results in increasingly diverse views regarding regional priorities and the vulnerable or mobile are less likely to be heard.

NGO and donor research in dryland areas is often carried out by generalist consultants, rather than specialist researchers or a combination of mixed specialities. It is important to make sure that when rigorous research is needed, rigorous methodologies are applied, while ensuring the local context and perceptions are understood and integrated in the resulting information.

There is often a lack of participatory, results-oriented monitoring and evaluation approaches, particularly regarding impact assessments. Outcome mapping and evidence of change monitoring¹⁵ approaches have the potential to track change in a complex and dynamic environment, but need to be complimented by more rigorous impact assessments particularly in relation to resilience.

Identification of critical knowledge needs

Defining research agendas is often done with little reference to the end user or without a clear strategy to promote its use. NGOs or donors often carry out

¹³ Held from 21–23 March 2011, Addis Ababa, www.future-agricultures.org

¹⁴ Exceptions include the P-FiM impact assessment ref and truly participatory evaluations where community members who are trusted by the communities collect opinions of community members.

research for their own internal program purposes or to have their own perspective, working in isolated disciplines, but may not share that information for wider use or input until published.

Research institutions linked to implementation and policy-making processes are more likely to ensure that their research responds to user needs and priorities and has a practical application. As research institutions are generally better at research, and practitioners are better at implementation, partnerships between the two are likely to be mutually beneficial. For example, Pastoral Livestock Initiative (PLI), Index Based Livestock Insurance (IBLI) and Milk Matters have all combined rigorous assessments with practical application as a result of partnerships between NGOs and research organizations. This is increasingly becoming the trend as investments are tied to impacts.

Some of the critical information needs that are lacking in dryland areas (e.g. reliable, basic human and livestock population statistics) are seen as the sole domain of government statistical agencies, and other organizations are reluctant to address them. This is partly due to the fact that this kind of data is highly political, as it is used to define political constituencies and ethnic population data. Thus some of the most basic information is lacking despite the fact it is essential in proper planning and understanding of priorities for the drylands. By addressing such challenges on an inter-agency basis with communities fully engaged, these sensitive issues can be raised, discussed and addressed - making it difficult for any one group to abuse or politicise the issue or results for their own gain. Joint data portals in which different types of data can be combined would be very useful in this regard.

There is generally an over-emphasis on explicit knowledge within formal research rather than the intrinsic forms of knowledge that are essential in understanding the complexity and dynamism of these areas. Understanding perceptions of different groups within communities is essential in determining how development interventions are designed and received, and how external

information is used. Where policy-making processes are essentially political, understanding the power of key actors and how to engage with them is critical in ensuring positive influence over the key actors and the integration of evidence-based information in their decision-making. However, despite lip service to public consultation, information about processes or even draft policies or strategies is rarely documented or made publically accessible by governments and other institutions, and those people with influence over decision-making already have the power to gain insights into policy-making processes. For example, information on content and the process of the pastoral policy in Uganda was not available until recent discussions facilitated its possible combination with the Rangeland Management Policy (IIED, 2012).

Monitoring and evaluation (M&E) can contribute critically both to knowledge generation and learning, as well as being a tool of performance management and the promotion of accountability (UNICEF 2008). Good M&E processes should engage all stakeholders and trigger reflection, learning and, ultimately, improved impact. Unfortunately in many organizations, M&E has become a procedural, compliance issue carried out to fulfil donor requirements within a narrow focus on outputs. In this case, achievement is measured in terms of process indicators and there is little focus on project impact and even less on organizational impact and how communities perceive that impact.

Current funding regimes mean that funding for M&E is linked to project budgets and timescales. Many NGO projects in the drylands are based on short term funding cycles (6-18 months) and are for narrow, donor-determined activities that neither respond to community priority needs nor are able to address the underlying causes of vulnerability. NGOs are aware that these types of activities are unlikely to lead to significant impact and are thus reluctant to carry out rigorous impact assessments or share information about impacts that may have negative implications for future funding allocations. For example, in the four phases of the European Commission Humanitarian Aid and Civil Protection Department (ECHO's) regional drought decision-

¹⁵ See 'Evidence of Change and Outcome Mapping as Learning Approaches to Monitoring and Evaluation' (http://www.elmt-relpa.org/FCKeditor/UserFiles/File/elmt/200912/Evidence%20of%20change%20approach_final%20draft.pdf)

making projects, there has never been a rigorous independent evaluation of impact - despite the 70 million Euro investment (Raven-Roberts et al. forthcoming).

As with development interventions in the drylands, there is often a lack of co-ordination of research and data collection. In an increasingly competitive environment for donor funds, NGOs are developing their own resilience frameworks and documents, rather than promoting collaboration and joint understanding, and are often motivated to engage in research in order to keep ahead in new debates or donor interest. This means that information is unlikely to be shared for all who could act on it; furthermore, the same information is re-produced by different organizations, wasting opportunities and resources.

There is an additional lack of coordination between existing and new agencies in the region. The mounting focus on the drylands by humanitarian

agencies, due to repeated crises, has meant an increase in organizations and individuals implementing projects in the region that have little knowledge or experience of working in these contexts. For example, in the 2011 drought in Kenya, much of the poor practice in water development (excessive water trucking, inappropriate borehole development) was carried out by agencies new to the area. Even existing agencies can lack regional context if they have little institutional memory to learn from the strategies and experiences of the past.

Additional failures include the various failed attempts to promote crop production in arid areas, the introduction of improved livestock breeds and business development by NGOs, as well as poor water development that has encouraged land fragmentation degradation (Flintan 2011). Because such poor practice and failures are rarely documented, these mistakes are regularly repeated by NGOs and governments.

Assessing capacities for knowledge management in the region

Given the plethora of actors engaged in knowledge management in the drylands, it is important to review the capacity of existing structures and actors, and to examine the extent to which it is possible to strengthen their capacities rather than create new structures and programs, particularly given the time it takes to establish initiatives and the relationships and respect for their effective functioning. It is particularly important to identify actors that are effectively building community and government capacities in knowledge management, so that scaling-up can be promoted and advanced.

Ramalingam (2006) outlines 5 competencies with associated criteria that are useful in assessing institutional capacities for knowledge management and learning, an example of which is given in Figure 4. The criteria are also useful in providing benchmarks

and indicators for strengthening capacities in knowledge management, although they need to be extended to the ability of organizations to promote knowledge management capacity externally, particularly with communities and governments.

Governments

Knowledge management within the region's government is poorly resourced and generally weak in relation to all 5 competencies listed in Figure 4. There is often low capacity and a weak culture of sharing or communication. Sectoral ministries rarely have dryland information or understanding and the dryland-focused ministries often lack the capacity or political influence to promote an understanding of dryland issues across ministries. Knowledge

Figure 4. Knowledge management competencies and example criteria

COMPETENCY	CRITERIA FOR MAXIMUM SCORE
Strategy	Knowledge and learning are integral parts of the overall organizational strategy. A set of tools is available and well communicated, and the capacity to apply them is actively strengthened.
Management techniques	Managers and leaders recognize and reinforce the link between knowledge, learning and performance. Managers regularly apply relevant tools and techniques, and act as learning role models. Staff terms of reference contain references to knowledge sharing and learning.
Collaboration mechanisms	Collaboration is a defining principle across the organization. A range of internal and external collaboration mechanisms operate, with clearly defined roles and responsibilities in terms of the organizational goals. Some have clear external deliverables while others develop capability in the organization.
Knowledge sharing and learning processes	Prompts for learning are built into key processes. Program staff routinely find out who knows what, inside and outside the organization, and talk with them. A common language, templates and guidelines support effective sharing
Knowledge capture and storage	Information is easy to access and retrieve. Selected information is sent to potential users in a systematic and coherent manner. High priority information assets have multiple managers who are responsibility for updating, summarizing and synthesizing information. Exit interviews and handovers are used systematically.

management functions are divided or not clearly assigned. For example, in Kenya both the National Drought Management Authority Kenya (NDMA) and the Arid and Semi-Arid Lands (ASAL) Secretariat have knowledge management functions, however it is unclear how they relate. Neither has a dedicated website, and that of the former Ministry of Northern Kenya and other Arid Lands¹⁶ is not easy to navigate and does not contain a document library. There are some more progressive attempts at improving knowledge management in the Kenyan Government and relating this to other stakeholders, through the establishment of the ASAL Stakeholder Forum and the further establishment of partnerships with research institutions including IIED and ILRI, as well as with CSOs.

Understanding the drylands and developing processes that adapt to the differences of dryland populations presents a major challenge to Government in the region. As Green (2012) states:

“Pastoralism, with its strong emphasis on family and clan loyalties, and on common, rather than individual, ownership of land and forests, throws down a profound challenge to many of the assumptions that underlie ‘modern’ governance. Whether such visions can co-exist is a test of the ability of governments and societies to recognise and encourage pluralism, rather than uniformity.”

This will involve adapting procedures to cope with the drylands and building capacities across government ministries. For example, although it is laudable that the Kenyan Ministry of Foreign Affairs sent round the newly signed AU Pastoral Policy Framework to all ministries instructing them to institutionalise it, it is unlikely that such directives will result in action unless there is an understanding of dryland issues and capacities within each ministry. Similarly, ‘the right to information’ by all citizens has been provided for in the 2010 Constitution¹⁷, although what information and how this will be disseminated is still unclear.

The increasing number of government partnerships with researchers, NGOs and the private sector offers much potential to improve knowledge management. The partnerships between the former Ministry of Northern Kenya, NGOs and the private sector in the Northern Kenya Investment Fund led to an increased understanding of the constraints to private sector investment in the region (REGLAP 2012).

The Ethiopian Government, with its stronger co-ordination mechanisms, has made some significant achievements in generating knowledge and promoting its use in dryland areas in partnership with other organizations. The National Livestock Policy Forum in Ethiopia, under the Ministry of Agriculture and Rural Development and with support from the Pastoral Livelihood Initiative and Tufts University, developed and promoted the National Guidelines for Livestock Relief interventions in pastoral areas of Ethiopia. The Agricultural Task Force, under the Disaster Risk Management and Food Security Sector (DRM FSS), is continuing similar work in Ethiopia, through promoting the use of crisis calendars to determine appropriate interventions in the drylands.

Building the capacity of local governments, agencies and communities to implement programs effectively and engage in productive knowledge management is an area poised for improvement. Local government offices in remote parts of the drylands are often poorly staffed and resourced and staff may not be from the areas where they work¹⁸.

Attracting and retaining staff with good knowledge management skills is difficult. Furthermore, local government offices are technologically ill equipped to undertake significant data collection, management and analysis. Consequently, locally collected data is often sent for analysis or verification at a national level, as was the case with the Drought Early Warning System (DEWS) data in Uganda¹⁹. Improving local stakeholders’ abilities to better manage local information and knowledge can

¹⁶ See <http://www.northernkenya.go.ke/>

¹⁷ See <http://www.kenyaembassy.com/pdfs/The%20Constitution%20of%20Kenya.pdf>

¹⁸ 70% of government staff in North eastern Kenya are from outside the area, Government of Kenya, Vision 2030 Annex.

¹⁹ See *The Early warning stage classification: a tool to enhance the efficiency of the Karamoja Drought Early Warning System*, in REGLAP Journal 2012:3

significantly improve analysis and decision-making. Thus an important area of research is determining the minimum structures and core capacities needed for a local government to run effectively, particularly given decentralization and the resilience agenda's requisite of streamlined, multiple planning processes for disaster risk reduction (DRR), climate change adaptation (CCA) and development actions.

Practitioners and policy influencers

Practitioners and policy influencers include a wide range of non-governmental organizations, civil society groups, donors, and UN agencies. Their capacities for knowledge management both internally and externally vary widely, although often capacity development for local organizations is weak in the region. In addition, there is a lack of attention to building institutional knowledge systems to ensure that learning is not lost either due to staff turnover or when projects and programs phase out.

Donors are therefore increasingly promoting consortiums for knowledge sharing and management, made up of a number of partners and partnerships between agencies, although these do not necessarily lead to improved inter-agency knowledge management unless the time and resources are put in place (Fowler, et al. 2010). Increasingly, UN agencies compete with NGOs for implementation and advocacy funding, even though their comparative advantages are different - UN agencies are often better placed for government capacity development and soft influencing, while NGOs are better at more direct advocacy and public awareness raising. Instead, organizations should play to their strengths and pro-actively complement one another's roles, rather than compete with one another.

Regional organizations

Regional organizations have the potential to share regional knowledge and promote the management thereof, although increased clarity is needed on what should be tackled at a regional level, rather than at national and local level.

There are a number of knowledge management platforms led by regional organizations that should be reviewed for their impact and lessons learnt, such as the Livestock Policy Initiative (LPI) and African Union/New Partnership for Africa's Development (AU/NEPAD). From LPI, it was felt that information dissemination alone was not enough to change policies and, in future, more practical, context-specific information needs to be fed to key decision-makers in strategic ways in order to have influence²⁰.

The development of the AU Pastoral Policy Framework involved many organizations and much reflection on evidence and good practice. The process of development and consultation with many experts and community representatives took over 3 years. However, once passed, there was no dissemination or roll out and, nearly two years after the ratification of the Framework by national governments, virtually no impact has been seen (REGLAP 2012).

It is important to ensure that such processes are not wasted and that implementation of existing policy frameworks is followed through, as well as ensuring that there dryland issues are mainstreamed into other relevant processes and fora (e.g. AU inter-ministerial meetings etc.).

Research institutions

There is a wide range of national and international research bodies operating in the Horn of Africa that are focused on different issues relating to the drylands, although not all specialise in the drylands nor have a comprehensive understanding of those issues²¹.

Local universities undertake research and may partner with international universities elsewhere, although many international organizations continue to carry out research in the region directly. With the exception of the few practice- and policy-oriented research institutions (such as Tufts University, Overseas Development Institute (ODI), International Institute for Environmental Development (IIED), and Institute of Development Studies (IDS)), the universities tend to be knowledge-generation

²⁰ As per an interview by the author with ex LPI staff member.

²¹ Through the Consultative Group on International Agricultural Research, a new CGIAR Research Program (CRP 1.1) focused on Dryland Systems has been developed.

focused and could benefit from more partnerships with communities, practitioners and advocacy organizations.

The private sector

There is wide recognition that knowledge management is key to maintaining a critical edge within the private sector; as such, there is likely to be limited interest within the sector for wider knowledge sharing. However, there is very little understanding of how to engage with the drylands' private sector in knowledge management, with regards to what information they have and are willing to provide and what information they need.

One exception is the preparatory work for the Northern Kenya Investment Fund, carried out in conjunction with the former Ministry of Northern Kenya and other Arid Lands (MNKoAL) with support from ELMT and FSD. A scoping study on the constraints to investment in northern Kenya included interviews with major financial institutions to explore their views on investment in the region²². The findings were revealing: many of the constraints identified related to myths, misconceptions and a lack of information, rather than real barriers. For example, one person interviewed knew "nothing about that region".

Clearly information on regional opportunities for investment is key, although more needs to be understood on the potential of socially beneficial models to inform private sector investment.

In the design of the Northern Kenya Investment Fund, one of the key constraints to setting up business was the lack of information on permits required. The system within Kenya is so unclear that it was decided that having a Unit within the former MNKOAL to provide information and clarity on the issuing of permits was necessary for the investment fund to be viable.

The costs of collecting information in dryland areas are relative high; this may be an area in need of subsidy, in order to promote new investment as well as an understanding ex ante the likely social and environmental impacts before and after investments.

With increased interest in private sector by NGOs, learning from the past and identifying and evaluating models that work need to be further assessed. An example are shared risk models to promoting investment in dryland areas, such as Vétérinaires Sans Frontières (VSF) Suisse's encouragement of private vet drug suppliers to supply dryland areas (VSF-S 2010).

The new interest in contracting out knowledge management services to private sector companies (such as the use of KIMERICA in USAID's new Pastoralist Areas Resilience Improvement and Market Expansion (PRIME) program) will provide an opportunity to learn whether their specialization as a knowledge management facilitator outweighs the potential disadvantages of being neither an implementing agency nor an advocacy or research organization.

Communities

Communities (and particularly the most vulnerable within them) lack the education, information and capacities to access and use external knowledge. Despite this, there is evidence that they are extremely adept at using their existing resources, social networks and organizations, for generating and passing information (e.g. scouts collecting information on rangeland condition) and adapting to new opportunities (e.g. by extensive use of mobile phones for passing information)²³. Much more attention needs to be paid to having community organizations and networks central to knowledge management efforts.

²² See Pipal and Reform Consultants. 2010. *Expanding investment finance to Northern Kenya and other Arid Lands: Market assessment, Task 1/phase III*.

²³ See *Strengthening information dissemination at community level: A Disaster Risk Reduction and Early Warning Information perspective*. A report to the Kenya Rural development Program/ASAL PM. 2012.

Key regional experiences in Drylands knowledge management and research

The following is a summary of some significant regional initiatives relating to the drylands in the Horn of Africa, that are worth drawing on for lessons learnt in the development of an effective knowledge management program. The initiatives mostly incorporate more than one element of knowledge management and promote partnerships with different types of organizations, although very few explicitly develop knowledge management capacity for communities or local government. It would be advisable to carry out a fuller review of lessons learnt from these initiatives and the capacities of the organizations involved to strengthen, link and broaden initiatives. Country-specific experiences should also be systematically reviewed for their regional lessons learnt and potential to strengthen national and local knowledge management. Good practice examples of developing community and local government capacity should be identified and shared.

The Livestock Emergency Guidelines and Standards (LEGS)²⁴

From early 2000, various agencies and individuals involved in livestock relief work began to question the quality and professionalism of their interventions (LEGS, 2013). This led to a process of bringing practitioners, researchers and experts together to define good practice based on rigorous impact assessments resulting in a single set of international standards and guidelines for livestock emergency interventions, linked to the “Sphere Standards”²⁵. The guidelines were first published in 2009 and were followed by the development and

roll-out of a training program for practitioners and trainers, and the establishment of a network of interested practitioners who continue to reflect on the guidelines and feedback to the LEGS project.

One of key factors in the success of LEGS was the process of engaging a wide range of actors both in the multi-agency steering group and in the development of the content. The steering group consists of practitioners, researchers, donors and policy influencers (FAO, International Committee of the Red Cross (ICRC), VSF, Tufts University, DfID and the AU) and is not owned by a single institution. The consultations among a range of other actors in the development of the guidelines led to its enrichment and ownership at an early stage.

Organizations not involved in the development of the guidelines are encouraged to send staff for training during half-day awareness raising sessions with managers and head quarters staff, while the 6-day training of trainers selects people that are likely to train others and focuses on the practical application of the guide.

Challenges have included obtaining rigorous impact information, particularly outside the HoA region, and resisting requests to make the guidelines broader, both sectorally and for the development phases of the disaster cycle.

The guide has been widely disseminated and adopted by practitioners and policy makers. It has been promoted by a range of donors including FAO and ECHO and has been adopted and promoted by governments including the Government of Ethiopia,

²⁴ Information additionally sourced from an interview with a LEGS co-ordinator

²⁵ The Sphere Project is a Humanitarian Charter and set of minimum standards of humanitarian response. See <http://www.sphereproject.org/>

who contextualized the guide by developing its own 'livestock in emergency' guidelines with the support of Tufts University and PLI.

LEGS is an appropriate model to address the need for more practical and evidence based guidance, however it is suggested that it would be simpler to focus these guidelines (at least initially) solely on the Horn of Africa, because of the similarities therein in terms of livelihoods and policy environment.

The Livestock Policy Initiative (LPI) ^{26,27}

The IGAD Livestock Policy Initiative (LPI) was operated through the Food and Agriculture Organization (FAO), with the financial support of the European Commission from 2005 to 2011. The overall objective of the IGAD LPI was to enhance the contribution of the livestock sector to sustainable food security and poverty reduction in the IGAD region. Its purpose was to strengthen the capacity in IGAD, its member states and other regional organizations and stakeholders, to formulate and implement livestock sector and related policies that sustainably reduce food insecurity and poverty.

The LPI had a Program Management Unit (PMU) based in Addis, which oversaw the process and contracted a number of high quality studies, provided technical advice, trained staff in synthesising information for policy makers and organized high level workshops.

Livestock policy hubs were created in each of the member states, which were multi-disciplinary groups including researchers, private sector, senior policy makers and NGOs. The hubs focused on two issues:

1. Ensuring livestock issues were appropriately represented in national poverty reduction strategies, which later became various national development plans; and
2. Developing country positions to feed into

the regional policy on animal health and trade, which was eventually adopted by IGAD member states.

The hubs also created national information nodes in order to screen and summarise policy-relevant information from studies and upload it onto a regional website, run by the Program Management Unit (PMU).

The program was absorbed by IGAD in 2011 as part of the IGAD Centre for Pastoral Areas and Livestock Development (ICPALD).

To date, there has not been a formal evaluation or joint reflection on lessons learnt from the initiative. Such a review would be of great value to subsequent initiatives. It became clear through the process that policies are not always based on evidence and there is a need to actively feed information to policy makers who have little time to read even synthesised summaries, and this requires strong staff who can engage effectively with high-level decision makers.

The AU Pastoral Policy Framework ²⁸

The AU Policy Framework for Pastoralism was developed over a 3-year period with extensive consultation with experts, governments, RECs and pastoralists themselves (REGLAP 2012a). It was overseen by a technical committee made up of key experts on pastoralism from throughout the continent. It was eventually approved by Head of States in January 2011 and represents a comprehensive and well-researched document that holistically addresses the many challenges confronting African pastoral communities.

Despite the time and resources put into the process, there has been little progress on the roll out or monitoring of the document's implementation, with little evidence of adoption and integration into national policies.

²⁶ See [http://www.disasterriskreduction.net/fileadmin/user_upload/drought/docs/IGAD%20LPI%20Project%20Commn%20FSTP%20Abdi%20Jama%20\(3\).pdf](http://www.disasterriskreduction.net/fileadmin/user_upload/drought/docs/IGAD%20LPI%20Project%20Commn%20FSTP%20Abdi%20Jama%20(3).pdf)

²⁷ This information was also sourced from an interview with a former LPI staff member

²⁸ See <http://rea.au.int/en/sites/default/files/Policy%20Framework%20for%20Pastoralism.pdf>

During 21-22 August 2012, the AU's Department of Rural Economy and Agriculture (the frameworks current custodian) organized a stakeholder meeting to present the proposed Pastoralist Policy Implementation framework and a mechanism for stakeholder participation; and to validate the draft Institutional and Resource Mobilization Strategy Framework. However, little has happened to date.

Regional Pastoralism and Policy Training

As a partnership between IIED, Tufts University, RECONCILE and MS-TCDC, the Regional Pastoralism and Policy Training aims to bring the evidence base to policy makers and practitioners via 2-week trainings on pastoralism and policy options in East Africa. The course was given at MS-TCDC in Arusha for NGOs and governments and is being adapted in Ethiopia into a shorter course for government officials. However, it has yet to be systematically rolled out in other IGAD countries.

The course is currently under review to update its content and method of delivery in the light of the changing circumstances in policy at regional and national levels in Eastern Africa and the Horn of Africa.

The Coalition of European Lobbies on Eastern African Pastoralism (CELEP)

CELEP is an informal advocacy coalition of European organizations, groups and experts working in partnership with pastoralist organizations, groups and experts in Eastern Africa (CELEP 2013). The Members of the Coalition work together to lobby their national governments, EU bodies (Council, Parliament and Commission) as well as other policy formulating bodies/agencies in Europe (e.g. the European Headquarters of the United Nations in Geneva and the Food and Agriculture Organization in Rome) to explicitly recognise and support pastoralism and the people that practise pastoralism in the drylands of Eastern Africa.

CELEP has an extensive membership of European and local organizations, and a vibrant e-list where documents are shared by researchers, practitioners and key issues discussed by its members. The CELEP

website is well developed having links to members' websites and information on specific issues. The network has shared information extensively and has carried out focused policy advocacy within the EU.

The Enhanced Livelihoods in the Mander Triangle (ELMT/ELSE) Program

The Enhanced Livelihoods in the Mander Triangle (ELMT) Program was the regional successor of the first phase of the Pastoral Livestock Initiative (PLI 1). It was also funded by USAID and took place in Ethiopia from 2004 to 2007 (ELMT 2013).

ELMT was implemented from 2007 to 2010 by a consortium of international NGOs and local partners in the Mander Triangle, the cross border area between Kenya, Ethiopia and Somalia. It was the central piece of a larger program: the Regional Livelihoods in Pastoral Areas program (RELPA) which supported the CAADP process and Tufts University to promote livestock and pastoralist issues within the CAADP process.

A significant amount of information was generated based on the knowledge and experiences of both indigenous communities, NGOs and government partners, including assessments of activities, the consolidation of lessons learnt, the testing of new approaches and processes, and the development of solutions or recommendations. Use of its information products were posted on a website, including newsletters, monthly e-bulletins, technical briefs and good practice bibliographies. Its website was handed over to the RECONCILE-led Horn of Africa Pastoral Network (HoAPN) which is now defunct, although discussions on regional CSO networking and advocacy are still led by RECONCILE.

The project promoted sharing of information as well as partnerships between practitioners and research organizations (e.g. VSF Suisse and KARI on fodder production and camel health and husbandry) and links between the Government and private sector (such as the scoping studies for the Northern Kenya Investment Fund) as well as consultations with pastoral representatives regarding the former Ministry of Northern Kenya's mandate, and a region wide-livestock marketing symposium that brought together over 200 stakeholders from Government,

the private sector, practitioners and research organizations (Nicholson et al. 2010).

Regional Learning and Advocacy Program (REGLAP) on vulnerable dryland communities

REGLAP (previously the Regional Pastoral Livelihoods Advocacy Project) is funded by ECHO and aims to reduce the vulnerability of pastoral communities through policy and practice change in the Horn and East Africa (REGLAP 2013b). It is a consortium currently consisting of CARE, Cordaid, Dan Church Aid, Oxfam, Save the Children and International Union for the Conservation of Nature (IUCN); in the past, it has also partnered with RECONCILE, VSF Belgium, ODI, IIED and national CSO networks.

REGLAP produces a number of good practice technical briefs and principles from various ECHO funded partners in the region, in order to disseminate good practice and learning from program implementation. Along with a webpage, it also produces a bi-annual journal that brings in external good practices as well as summaries of key documents, on-going research and key statistics.

REGLAP has recently established regional learning groups led by individual consortium members, focusing on community-based approaches to DRR, water development for DRR, and strengthening evidence base for DRR advocacy. REGLAP regional learning groups also carry out advocacy on key resilience issues via country advocacy groups.

REGLAP has also carried out some widely quoted studies and briefs, and advocates for more rigorous impact assessment and evaluations among partners. However, as part of an ECHO funded program that operates in 18-month phases and supports a number of international NGOs to carry out short term DRR interventions, REGLAP is limited in its scope and reach (REGLAP 2012b, 2013a).

ILC/IFAD Learning Initiative: Making Rangelands Secure²⁹

This regional learning initiative aims to improve understanding on how rangelands can be better protected for local rangeland users, including pastoralists; and how such security can better contribute to development processes under the influence of increasing and new challenges. It runs from 2010 to 2013 supported by the International Land Coalition (ILC), and its partners include IFAD, Procasur, RECONCILE and WISP.

The main learning components are:

- **Learning routes** to communities or organizations that have different experiences on securing rights to rangelands. The participants are drawn from governments, development agencies and CSOs largely from the East Africa region, who are selected for the potential to use the experiences and lessons gathered from the learning route in their work and organizations.
- **Influencing ‘soft’ advocacy and building of a ‘critical mass’.** The initiative focuses mainly on three countries – Kenya, Ethiopia and Tanzania (though activities in other countries will also be supported). Through the different activities/components of the learning initiative, this critical mass is growing - reflected by a mailing list of over 400 individuals from governments and NGO/CSOs, among others.
- **Cross-organizational learning.** This includes supporting a learning visit for NGO/government staff from Ethiopia, Somaliland and Uganda to Niger; documenting and resource support to Oxfam Ethiopia for a series of meetings on land issues for government staff; providing resources and research support to RECONCILE for documenting experiences on securing rights to rangelands in order to influence Kenya’s Community Land Bill; and supporting a pilot activity for mapping livestock corridors in Tanzania with the Ministry of Livestock Development and Fisheries.

²⁹ Based on information provided by technical advisor to the project.

- **Documentation.** The learning initiative is producing a series of publications that share experiences and lessons learned in different formats including input from those who have participated in the learning routes and other program activities.

The learning initiative has an Advisory Committee of around 15 members from different organizations working on land issues in rangelands. This includes members from the AU (African Union), research-oriented organizations, development agencies and NGO/CSOs. The involvement of these individuals (targeted for their position in organizations of influence and their expertise/experience) is also seen as an entry point to some of the member organizations. The initiative is in its early stages and will need further monitoring and evaluation to assess impact and lessons learnt.

Key research and knowledge management gaps identified in the other IDDRSI technical briefs

A summary of the recommendations from the other IDDRSI sectoral Technical Briefs for knowledge management and research is provided below. The summary focuses predominantly on research gaps; there is a need for further prioritisation and discussion on how these fit within a broader knowledge management agenda. This agenda also needs to be developed with input from communities, member states, IGAD and development actors so that it is owned and acted upon in future. REGLAP's prioritisation of research gaps (see Annex 2) could be used as a discussion document with a range of actors to promote consensus and the filling of key research gaps.

Livelihoods and basic services

- More clarity and agreement between all relevant actors, governments, NGOs researchers on appropriate models for basic service provision - especially around education and livestock health where there is an insistence by government of adherence to national standards, but no provision of these standards in dryland areas.
- Frameworks that promote clearer evidence-based priorities for development in dryland areas and holistic approaches that address vastly differing dryland environments, drawing from innovation and including information on non-traditional actors such as the private sector.
- Overall, M&E is required to identify the aspects of integrated programs that are working and those that are in need of revision for the overall success of development efforts.

Markets and trade

Land use research to help make informed decisions about land use management plans, as well as local knowledge about livestock trekking routes, animal grazing and watering paths, cultivation zones and market access routes.

NRM

- A full resource inventory of rangelands and natural resources as a basis for making strategic and participatory decisions on land use planning, management and development, and how pastoralism can best be supported and integrated.
- Research and knowledge-sharing on technologies that increase or maintain productivity and enhance the natural resource base, and on ecological services provided by agriculture systems.
- An agreed system for both assessing and taking into account the value of environmental goods and services and the associated opportunity costs, to be better incorporated in investment decision-making.
- Promotion of available technologies and institutional co-ordinated arrangements to overcome water shortages.

Disaster management

- Initiatives to promote understanding and use of early warning information.
- Promote better and more specific response

analysis, together with early warning information

- Ensure that decision-makers and households in the affected areas have access to early warning information.
- Promote preparedness and action, well before the emergency unfolds.

Conflict

- Comprehensive conflict analysis with rigorous evidence that accounts for governance institutions and policy, divisive political processes relating to valuable economic resources such as land, and the citizen–state contract.
- More in-depth research and analysis on how states and traditional institutions can better cooperate and work toward a common vision in the pastoral areas of the region.

Towards a regional Drylands management program

Any new program for knowledge management needs to include a more systematic review of the impact and lessons learnt of past initiatives, as well as the assessment of available capacities - particularly in relation to communities and governments. The level at which different interventions are best carried out should be further explored, as interventions are primarily needed at local, then national and only sometimes regional level. Sustained support should address all aspects of knowledge management, with a particular focus on the weaker areas. It is unlikely that one program will address all these issues; preferably, different initiatives should emerge with a common understanding of knowledge management and the vision and strategies required to strengthen and link the various aspects.

There are a number of areas that should be prioritised in such a review:

- Lessons learnt from the Livestock Policy Initiative and other IGAD/REC knowledge management programs.
- Understanding of member states' own knowledge management systems and how focal points for drylands information can relate to and build the capacity of other line ministries and local government, to respond better to dryland issues.
- Good practice in building knowledge management capacity of communities and government.

There are other areas of work that are clearly needed in strengthening knowledge management in the region, including:

Knowledge generation/collation

- Support national statistical offices' use of more appropriate methodologies to **collect reliable basic data for drylands areas**.
- Support ministries of planning to ensure that **community priorities are collected and fed into planning processes**.
- Encourage more **evaluation and impact assessment of potential good practices**, particularly any innovative approaches and those focused on community empowerment, local government capacity building and private sector engagement.
- Promote **evidence-based good practice guidance on key areas** of intervention - particularly water development, rangeland health, livestock marketing etc. This could be based on the LEGS approach, engaging different types of organizations and grounded on rigorous impact assessments. To maximize practical application, it is recommended that these guides focus on the Horn of Africa with country contextualisation where possible.
- Promote discussion and understanding around **the concept of resilience and how to measure it**. This should include open discussion on the usefulness of the concept, the relative importance of its components and cost effectiveness. Further work is likely in developing national indicators for resilience and ensuring that the national statistical offices and ministries of planning have capacities to collect and use information in planning.
- Promote **more consensus on key knowledge gaps** with all actors, and promote more action-oriented research.

- Keep a **public database of on-going research, with contact points** at national and regional level so that possibilities for addressing key gaps and collaborative research can be promoted and shared. This will ensure that research efforts are not duplicated (see Annex 1).
- **Promote learning and sharing cultures within all organizations, including NGOs and development partners**, and guarantee that honesty and critical self-reflection is rewarded.

Knowledge dissemination

- **Drylands in the Horn of Africa website.** Link the various nodes of information on drylands resilience into one website, to ensure that the information is easily accessible. This will require within the website links to other sites and effective search facilities, as well as a comprehensive good practice bibliography of key documents and key statistics on dryland areas that should be continuously reviewed and updated (see Annex 2 and 3 for examples).
- **Promote sharing of information by all organizations.** Ensure all information generated by any knowledge program is uploaded onto publically accessible websites. Promote data-sharing agreements with all institutions, including donors, and provide grants to local research organizations and governments to upload all relevant documents systematically.
- **Support governments to disseminate information to communities and regions, particularly around draft policies, processes and budgets, and encourage consultation.** Promote public information on budget allocations and plans, and strengthen transparency and accountability mechanisms for all activities in the drylands.
- **Disseminate information on the IDDRSI process.** Ensure all information about the IDDRSI processes is publically available, including draft plans, strategies and budgets for community input and monitoring.
- **Community information provision.** Increase attention to the provision of critical information

to communities, and to addressing their information needs in more appropriate forms. Promote community input into knowledge generation including more marginalised groups and build capacities and opportunities to use information.

Promoting the use of knowledge

- Support the revision, contextualisation and **roll out of pastoral policy training** for all government decision makers so that it deals with changing realities and is made as context-specific as possible. Develop similar modules on the evidence base regarding good and bad practice in dryland development for practitioners.
- Carry out **update workshops with government officials** to review new evidence and identify implications for policy implementation and prioritisation.
- Support the **roll out and monitoring of the AU Pastoral Policy Framework** at regional and national levels.
- Build the **capacity of community members and champions** to understand and engage with policy process and hold duty bearers to account.

Encouraging joint decision-making

- Support stakeholders across all levels to **clarify and agree on desired outcomes.**
- Ensure knowledge management components (including evidence and experience based information, knowledge and wisdom) are available to **support transparent and informed joint decision-making processes.**
- Jointly identify decisions to be taken to achieve the desired outcomes and **test those decisions against a set of commonly agreed criteria.**
- Use **effective monitoring systems to rapidly provide feedback** on whether the decision taken is leading to more resilient outcomes.

Conclusion

Knowledge management has emerged as a new science that integrates the relevant intelligence across the data-to-wisdom continuum from available sources, resource persons and institutions and “enables individuals, teams and organizations to collectively and systematically create, share, learn and apply knowledge to better achieve their objectives”³⁰. It is a structured process of learning for action and is far broader than knowledge generation or information/data management. Thus, improvements in knowledge management to increase resilience in the drylands of the Horn of Africa will require a much more synergistic, systematic and holistic approach, rather than simply an accumulation of more data, additional research, or information dissemination mechanisms.

This paper, as well as the other Technical Briefs in this series, have identified a number of significant gaps that need to be addressed within a collective and systematic approach, including such elements as census information, impact assessment mechanisms, coherent guidance on adapting good practice to specific contexts, intrinsic knowledge capture (including bad practices and past failures), and the positive and negative policy implications and outcomes of related decision-making processes, investments and budgets.

Alongside these, an important area within the knowledge management learning process which requires support is the increase of community capacities (and the most vulnerable within them) to access, use and add value to knowledge, to advocate to decision makers and hold duty bearers accountable for positive change. This is far more about strengthening governance than the development of further user-friendly information.

Inclusive and transparent governance and decision-making is ultimately what is lacking in the drylands of the Horn of Africa. Its focus within a robust resilience agenda is critical in determining whether increased attention to the concept will be authentic and represent a new departure in long-term understanding and support of a resilient drylands program, or if it will maintain drylands vulnerability and perpetuate a lucrative aid industry.

This paper has mapped and reviewed a number of existing knowledge management components and tools that can readily be incorporated into an overall knowledge management approach for the HoA. Knowledge management in the Horn of Africa provides an ideal opportunity to bridge research, practice and policy in a coherent and co-learning way focused on achieving outcomes and taking those outcomes to scale.

The critical next activity should be to invest in a more formal mapping and expert consultation to develop a flexible, open and coherent knowledge management framework within the context of desired outcomes and priority decisions - underpinning it with those relevant existing efforts and lessons for continued improvement. This will entail integrating what has worked in the past and what may work in the future, taking advantage of new technologies for rapid knowledge exchange as they become available.

A related effort to build upon is to ensure that existing investments, in the development of the Technical Briefs and the Country Program Papers, continue to use the latest evidence and experience to inform the priorities, demands and decisions of the countries in their programming. Another immediate opportunity is to work closely with the Resilience Learning

³⁰ <http://www.knowledge-management-online.com/what-is-Knowledge-Management.html>

Project that USAID will be initiating in the HoA³¹ that is expected to a) facilitate the adoption of resilience-enhancing technologies and innovations; b) develop and test models for integrating humanitarian and development assistance; c) facilitate and catalyze widespread adoption of effective models using the Collaboration, Learning, and Adaptation (CLA) approach to address development in the arid and semi-arid lands; d) strengthen the capacity of regional, national and local institutions to translate learning into programs and policies; and (e) address gender issues that are key to achieving growth and resilience across the humanitarian and development assistance continuum.

A functioning knowledge management system will require the full collaboration of the donor and investment community, public and private sector, the research community, development and humanitarian partners, male and female farmers, pastoralists and fisherfolk and their communities. The 'proof of purchase' of the Knowledge Management approach for the HoA will be demonstrated by increased resilience - positive change on the ground - that results from a synergistic integration of intrinsic knowledge and practical experience, research outputs, enhanced capacity and co-learning, changes in decision-making processes and supportive policies.

³¹ The Resilience Learning Project: https://www.fbo.gov/?s=opportunity&mode=form&id=07664cb654346acdc45b95e6b8a13012&tab=core&_cview=0

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Annexes



Regional Learning &
Advocacy Programme
for Vulnerable Dryland
Communities

Key statistics on the drylands of Kenya, Uganda and Ethiopia, REGLAP Secretariat, October, 2012

REGLAP Secretariat

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Acronyms and Abbreviations

ACF.....	Action against Hunger
ALRMP.....	Arid Lands Resource Management Project
ASAL.....	Arid and Semi-Arid Land
CDF.....	Constituency Development Fund
CELEP.....	Coalition of European Lobbies for Eastern Africa Pastoralism
COMESA.....	Common Market for East and Central Africa
DFID.....	Department for International Development (UK)
FDRE.....	Federal Democratic Republic of Ethiopia
FSNWG.....	Food Security and Nutrition Working Group
GDP.....	Growth Domestic Product
GoK.....	Government of Kenya
GoU.....	Government of Uganda
GTP.....	Growth Transformation Plan
HDI.....	Human Development Index
HSNP.....	Hunger Safety Net Programme
IFPRI.....	International Food Policy Research Institute
IGAD.....	Inter-Governmental Authority on Development
IIED.....	International Institute for Environment and Development
ILBI.....	Index-Based Livestock Insurance
IRAM.....	Institute for Research and Application of Development Methods
LATF.....	Local Authority Transfer Fund
MoARD.....	Ministry of Agriculture and Rural Development
NDVI.....	Normalized Difference Vegetation Index
ODA.....	Overseas Development Assistance
OECD.....	Organisation for Economic Cooperation and Development
OTP.....	Outpatient Therapeutic Program
TFP.....	Therapeutic Feeding Program

UNDP.....United Nations Development Programme
UNDP DDC.....UNDP Drylands Development Centre
UNICEF.....United Nations Children Fund
USAID.....United States Agency for International Development
WASH.....Water Sanitation and Hygiene
WESCOORD.....Water and Environmental Sanitation Coordination
WB.....World Bank
WFP.....World Food Programme
WRI.....World Resources Institute

1. Population and General

There are approximately 20 million pastoralists across Sub-Saharan Africa. Pastoralists - people who depend primarily on livestock or livestock products for income and food- typically graze their animals on communally managed or open-access pastures, and move with them seasonally. Adding in agro-pastoralists-who derive 50 per cent of their income from non-livestock resources-the numbers reaches over **30 million** in the Greater Horn of Africa (CAADP Policy Brief No.6, March 2012).

Kenya:

Dryland areas (or ASALs – arid and semi-arid lands) make up more than 83% of the country, and Northern Kenya constitutes most of this area (NKIF, 2012). They are home to approximately 4 million pastoralists who constitute more than 10% of Kenya's population plus other rangeland users (Kirbride & Grahn 2008:8). Livestock raised by pastoralists is worth US\$800 million per year (AUIBAR in IIED and SOS Sahel 2010). Pastoralists occupy most of the border areas of Kenya, with pastoral groups straddling borders with Somalia, Ethiopia, Sudan, Uganda and Tanzania. Pastoralists are divided into various ethnic and linguistic groups, ranging from the large and famous groups like the Maasai and the Somali, who number in excess of half a million people each, to small and so far obscure groups numbering a few thousand¹ (Umar, 1997).

Kenya's livestock production accounts for 24% of total agricultural output. Over 70% of the country's livestock and 75% of the wildlife are found in the ASALs (GoK 2005b cited in Orindi et al. 2007). Despite this, pastoralist areas have the highest incidences of poverty and the least access to basic services of any in the country. The highest poverty levels remain in the northern pastoralist districts (Kirbride and Grahn, 2008). Droughts are common in the ASALs, and it has been suggested that they have increased in frequency. The prolonged drought of 2008-9 has been attributed (at least in part) to climate change (Campbell et al., 2009).

Uganda

Rangelands cover an estimated area of 84,000 sq km and contain a population of around 6.6 million (Kisamba-Mugerwa, 2001). This makes up 42% of the country's total land area of 199,710 sq km (with another 36,300 sq km as water) (total population in 2006 was 27,356,900). Arable land is said to cover 25,885 sq km, 10.65% permanent crops and only 90 sq km was irrigated in 1998 (Government of Uganda Home Portal 2011). The rangelands receive rainfall between 500-1000 mm annually, which has high variability (Kisamba-Mugerwa 2001; MAAIF 2002 in Orindi and Eriksen 2005).

Pastoral areas are mainly found in what has been called the 'cattle corridor' (see Figure below), which

¹ Groups are often spread across different areas. For example, the Maasai are found in Kajiado, Narok, Transmara, Laikipia and parts of Baringo district. They are cousins of the *Samburu* (speaking the same language) who in turn reside in Samburu, Marsabit and Isiolo districts.

Afar and Gondar, and Borana and Bale. The 2007 census indicated 6% of the country's population were pastoralists, with just fewer than 5% described as agro-pastoralists.

1.1. Population growth rates

1.1.1 Kenya

The population of North Eastern Province increased six fold between 1989 and 2009 from 371,000 to 2.3 million (Fitzgibbon, 2012 p.5). Fertility rates in Kenya pastoral districts was 6.7% compared to 5% nationally from 1995-2000.

1.1.2 Ethiopia

In 2005, the population growth rate was 6% in Somali compared to 5.4 % national average.

1.2.3 Uganda

Karamoja Districts³	Average Annual Growth Rate, 2002
Moroto	5.8%
Kotido	5.5%
Nakapiripirit	5.9%
<i>National</i>	3.5%
Total Karamoja Population: 1,083,000	

Source: Uganda Bureau of Statistics. (2002 Uganda Population and Housing census Report

1.2. Livestock mortality from drought

No good data is available on the number of livestock mortality from drought. Informal estimates from Lammert Zwaagstra and Rob Allport⁴ for 2010/11 were 15%, similar to Index-Based Livestock Insurance (ILBI) estimates. IBLI assessment for Marsabit was that there was 10% livestock mortality in 2010/11 due to drought. IBLI has done a lot of research on predicting mortality, which perhaps could be used for strengthening predictions in the future. Tufts Borana estimates of 17 and 14% in Yabello and Borena⁵. World Bank indicates that estimated livestock mortality as a result of the 2011 drought was about 10-15 percent above normal in the affected areas, which is equivalent to 5 per cent

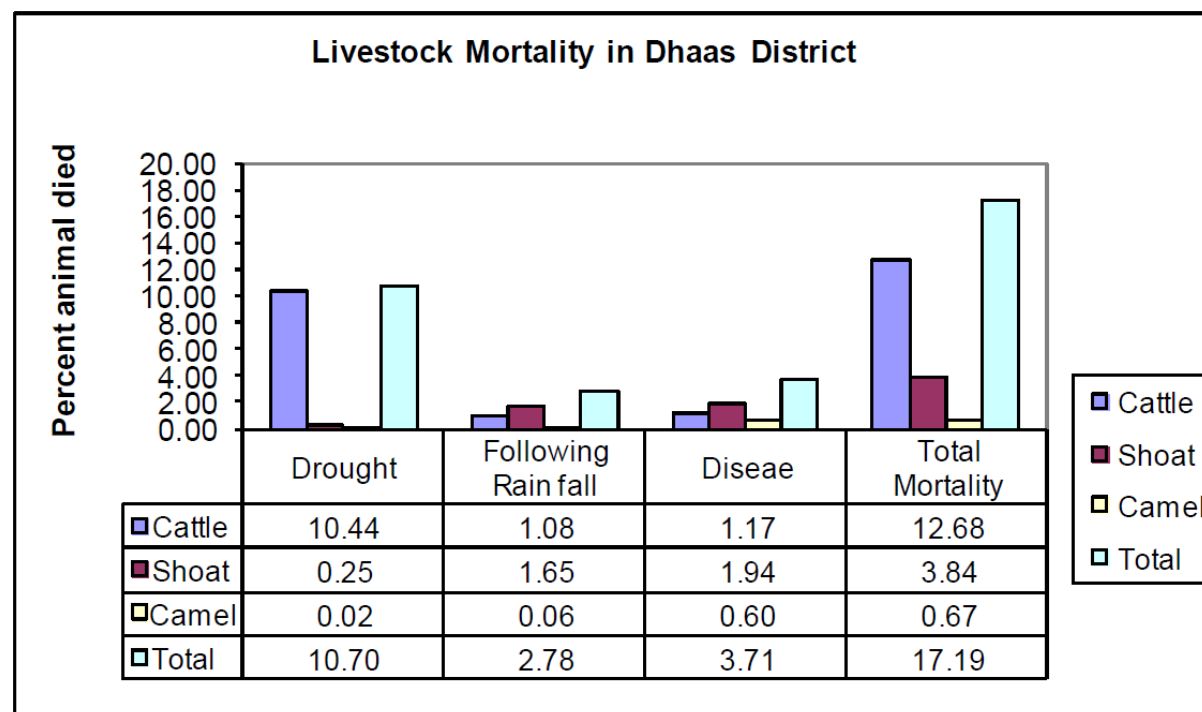
³ In 2002, there were only 3 districts in Karamoja, hence the information only on Moroto, Kotido and Nakapiripirit

⁴ Personal correspondence

⁵ Dawit Abebe – powerpoint, unpublished

of Kenya's livestock population (World Bank, 2011). There is however need for more research and systematic data collection in this area.

The 2010-2011 Drought Situation in Yabello and Dhaas Districts



Source: Abebe, D and Admassu, B. (September 2011). Presentation on the Update on the 2010-2011 drought situation and response in Borena Zone.

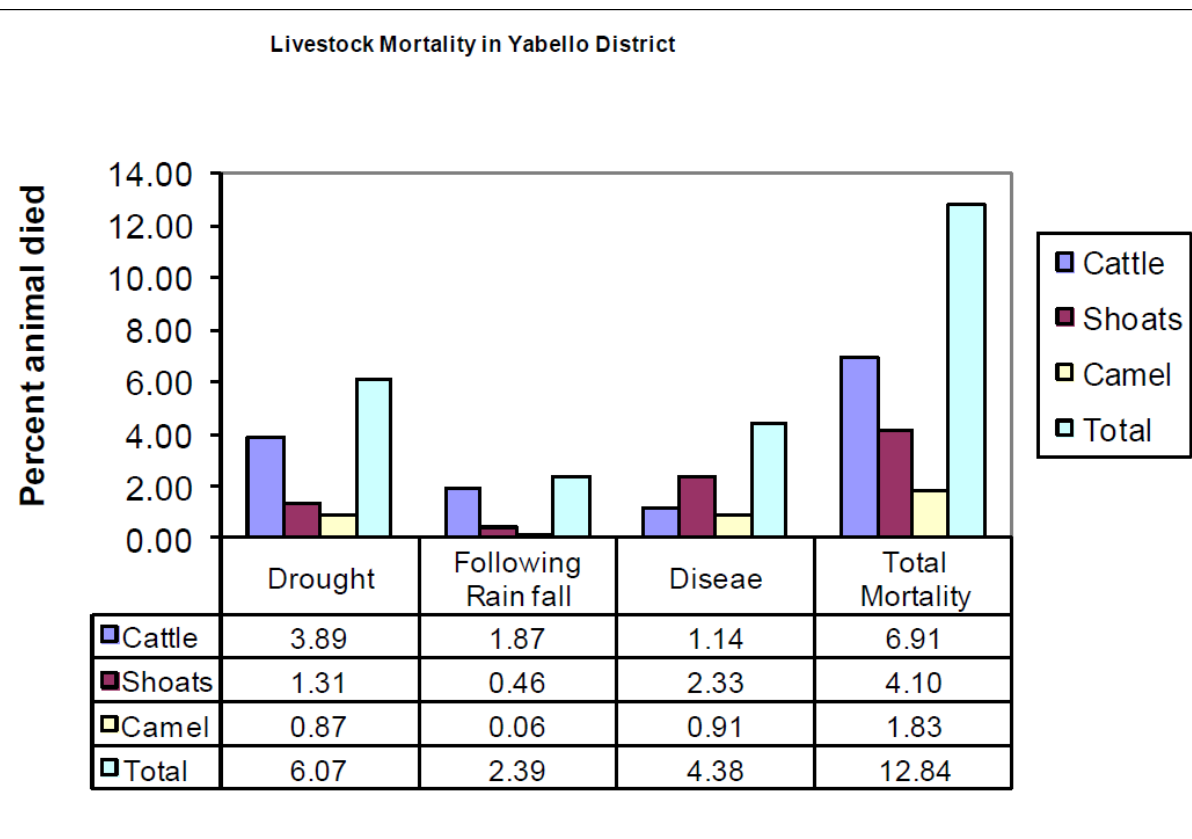


Table 5: Proportion of respondents citing different causes of dropout by districts

<i>Reason for herd loss</i>	<i>Babile</i>	<i>Fik</i>	<i>Hamaro</i>	<i>Shinile</i>	<i>Global</i>
<i>Herd loss due to insecurity</i>	22.0%	37.1%	29.8%	20.5%	26.9%
<i>Herd loss due to drought</i>	92.7%	97.1%	100%	100%	97.6%
<i>Herd loss due to animal diseases</i>	92.7%	85.7%	83.0%	84.1%	86.2%
<i>Herd loss due to pressure from large family</i>	17.1%	5.7%	4.3%	18.2%	11.4%
<i>Loss due to mismanagement of herd</i>	7.3%	11.4%	0.0%	4.5%	5.4%

Source: Save the Children UK, (Dec 2009). *Pastoral Dropout study in Jijiga, Shinile and Fik Zones of Somali Region, Ethiopia.*

In the near future, any delay or below average in *Hagaya* rain will lead to catastrophic livestock loss; in the northern half of the region due to high livestock concentration that potentially leads to untimely depletion of grazing reserve. In the Southern half of the zone grazing is already exhausted and livestock condition deteriorated, and highly sensitive (Abebe and Admassu, 2011).

1.3 Proportions of livestock-reliant populations

1.3.1 Regional

1.3.2 Kenya

The 2009 national census indicate that ASAL citizens makes up 36% of the population - 12% in arid counties and 24% in semi-arid. That's a significant proportion of Kenyans whose production systems and cultures are still not adequately catered for within national policies and strategies. The country is home to 4 million pastoralists (Oxfam Briefing Paper, 2008). 75% to 85% of the population in North Eastern and Eastern Provinces are pastoralists who rely on livestock for living (SDC's water tender). PFIM in a report on Turkana stated that 64% of population are dependent on pastoralism and a further 16% dependent on agro-pastoralism. Income from livestock is growing for better off wealth groups but declining significantly for poor (as dropping out).

1.3.3 Uganda:

Households in Karamoja that own livestock: 80% (Uganda Bureau of Statistics, 2002 Uganda Population and Housing census).

1.3.4 Ethiopia

Shinile zone: 76% pastoralist in 2006 (Catley and Iyasu, 2010). Around 75% of the livestock population live in the highlands, with the other 25% held in the arid and semi-arid grazing areas in the southern, eastern and western lowlands, and generally managed in migratory pastoral production systems (Van Giessen, 2011).

Table 3. Human population estimates for Shinile Zone

<i>Woreda</i>	Rural population	Pastoralist population (% of rural population)
Shinile	96,988	77,591 (80%)
Dembel	77,321	30,928 (40%)
Ayisha	50,043	50,043 (100%)
Erer	83,471	66,777 (80%)
Afdem	31,991	31,991 (100%)
Mieso-Mulu	45,570	36,456 (80%)
Total	385,384	293,786 (76%)

Source: DPPA/SCUK, 2008.

Misperceptions about pastoralism

The arid lands are disadvantaged because of inequalities in access to resources and power, but not necessarily because the land is dry or climate change. “The solutions will require time, cross-sectional collaboration, and radical shifts in thinking and approach” (The ASAL Secretariat, 2012 p.12). Below are some of the misconceptions surrounding pastoralism⁶

⁶ See UNDP. (June, 2003). Pastoralism and mobility in the drylands: The Global Drylands Imperative. www.undp.org/drylands/docs/cpapers/PASTORALISM%20PAPER%20FINAL.doc.
<http://data.iucn.org/wisp/myths-misconceptions.html>

Misconceptions surrounding pastoralism ⁴	Principles of sustainable pastoral development ⁵
<i>"Nomadic pastoralism is an archaic form of production, whose time has passed."</i>	Pastoralism is a rational land use system that is practised worldwide in response to the uncertainties and resource constraints of rangeland environments
<i>"Mobility is inherently backward, unnecessary, chaotic and disruptive."</i>	Mobility is a rational response to seasonal resource patterns and climatic unpredictability.
<i>"Most rangelands are degraded as a result of pastoral over-grazing."</i>	Most rangelands are in good environmental condition where mobile pastoralism practices take place.
<i>"Pastoralists do not take care of the land because of the Tragedy of the Commons."</i>	Pastoralists have the knowledge and skills for sustainable, communal management of their lands.
<i>"African pastoralists do not sell their animals; they prefer to hoard them, admire them and compose poems to them."</i>	Pastoralists are economically rational, producing milk and meat and selling products when markets allow, and according to their needs and their perception of risk.
<i>"Pastoralists contribute little to national economic activity."</i>	Pastoralists contribute significantly to the economies of all countries in the Horn of Africa. In Kenya, recent research by KNBS and IGAD puts the contribution of livestock to GDP at around 13%, which is 150% higher than previously thought.
<i>"Pastoralism has very low productivity. Sedentary cattle raising is more productive than mobile systems."</i>	Pastoral livestock productivity is significantly greater than alternative systems under the same environmental conditions.
Misconceptions surrounding pastoralism ⁴	Principles of sustainable pastoral development ⁵
<i>"Pastoral techniques are archaic; modern scientific methods need to be introduced."</i>	Pastoral knowledge and skills are extensive and highly tuned to their environment, and should form the basis to which new science is adapted.
<i>"Pastoralists need to settle to benefit from services."</i>	Mobility is a prerequisite for effective pastoralism, and therefore services must be provided that are compatible with this condition.
<i>"All pastoralists are rich; alternatively, all pastoralists are poor and food insecure."</i>	Pastoral communities, like any other, include both rich and poor households, but structural poverty in pastoral areas is one of low human development and failure to satisfy basic human rights and freedoms.

2. Development Indicators

2.1 Poverty Levels

2.1.1 Kenya:

The ASAL populations experience the lowest development indicators and highest incidence of poverty in the country. They contain 18 of the 20 poorest constituencies in Kenya. In the vast northern districts of Turkana, Marsabit, Wajir and Mandera between 74% - 97% of people live below the absolute poverty line.⁷

⁷ Releasing our Full Potential – Draft Sessional Paper on National Policy for the Sustainable Development of Northern Kenya and other Arid Lands: 2009 Government of Kenya, Office of the Prime Minister, NKIF, 2012

Table 1 Human Development Indices (HDI) and Human Poverty Indices (HPI) for Kenya pastoralist districts

District	Type	HDI 1999	HDI 2003	HDI 2005	HPI 2005
Turkana	Arid	0.2455	0.308	0.172	36.2
Wajir	Arid	0.2593	0.346	0.256	n/a
Garissa	Arid	0.3427	0.441	0.267	n/a
Tana River	Arid	0.3780	0.382	0.307	36.1
Mandera	Arid	0.3246	0.427	0.310	n/a
West Pokot	Semi-arid	0.3350	0.241	0.334	n/a
Samburu	Arid	0.3982	0.356	0.347	41.8
Kajiado	Semi-arid	n/a	0.468	0.348	38.6
Marsabit	Arid	0.2890	0.395	0.411	42.3
Narok	Semi-arid	0.4462	n/a	0.502	40.1
Isiolo	Arid	0.4245	0.522	0.580	36.6
Transmara	Semi-arid	n/a	n/a	0.582	39.8
Laikepia	Semi-arid	0.5415	0.536	0.585	n/a
Moyale	Arid	n/a	n/a	0.674	n/a
Baringo	Arid	0.5062	0.508	n/a	n/a
National average		0.5035	0.550	0.532	42.3

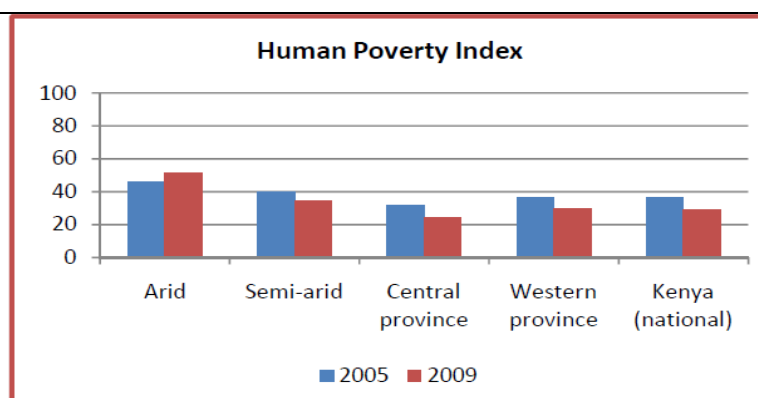
Note: Coloured boxes represent districts that had the worst performance for the given indicator.

Source: Kenya, Republic of (2007). Kenya Integrated Household Budget Survey (KIHBS) 2005/06. Volume 1 Basic Report, January, 2007

Figure 1:

Only in the arid lands was human poverty worse in 2009 than it was in 2005.

Source: Kenya National Human Development Reports for 2005 and 2009, analysed for MDNKOAL by REMPAI (Resource Management and Policy Analysis Institute). The human poverty index has four dimensions: longevity, knowledge acquisition, economic status, and social inclusion.



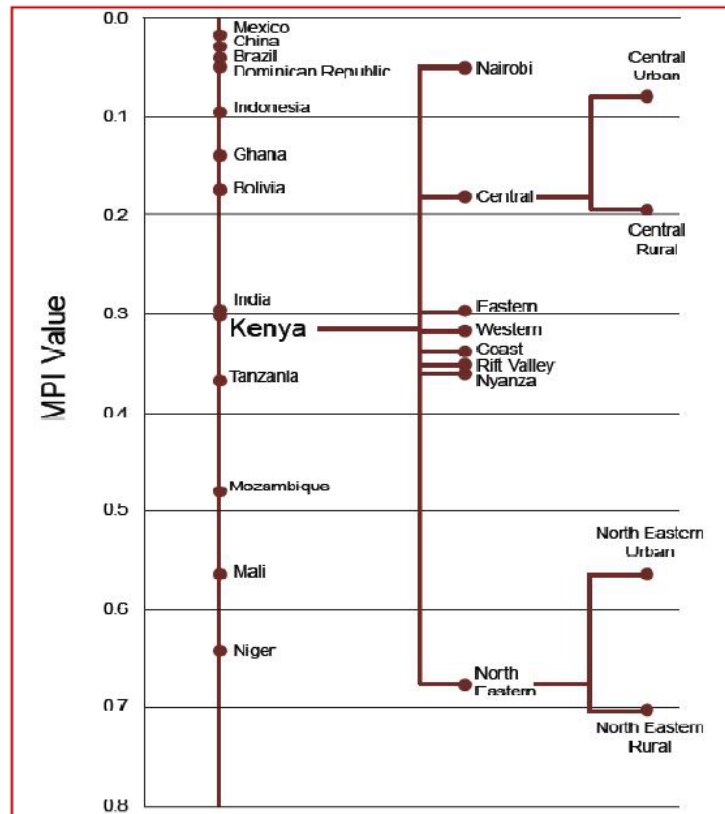
A livelihood study in 2007 in North-eastern Kenya found a notable increase in poverty with the very poor and poor wealth groups increasing from 45-50% of the population to 50-60% in the preceding five years⁸. The highest rates of poverty are observed among those who are no longer directly involved in pastoralism, particularly those without livestock who depend on casual labour or petty trade in towns (NKIF, 2012). “Only in the arid lands was poverty worse in 2009 than in 2005” (ASAL Secretariat, 2012).

⁸ Save the Children. (2007). Vulnerability and Dependency in 4 Livelihood Zones in North Eastern Province, Kenya

Figure 2:

Rural areas of North Eastern Province are worse off than Niger, one of the poorest countries in the world, when the multiple dimensions of poverty are taken into account.

Source: Oxford Poverty and Human Development Initiative, 2010: Multidimensional Poverty Index (MPI), Research Brief, July 2010. The Multidimensional Poverty Index (MPI) is a new international measure of poverty which identifies those who face deprivation across multiple indicators (education, health, and living standards). For the first time it identifies the proportion of people affected by different types of poverty simultaneously.



Source: The ASAL Secretariat (2012). *A Proposal from the Ministry of State for the Development of Northern Kenya and other Arid Lands*. Government of Kenya

Figure 2: Human Development Indicators

Figure 3:

The Human Development Index is nearly twice as high in Nyeri as in Turkana

Source: Kenya National Human Development Report, 2009. The human development index is a composite measure of life expectancy, literacy, enrolment, and purchasing power.

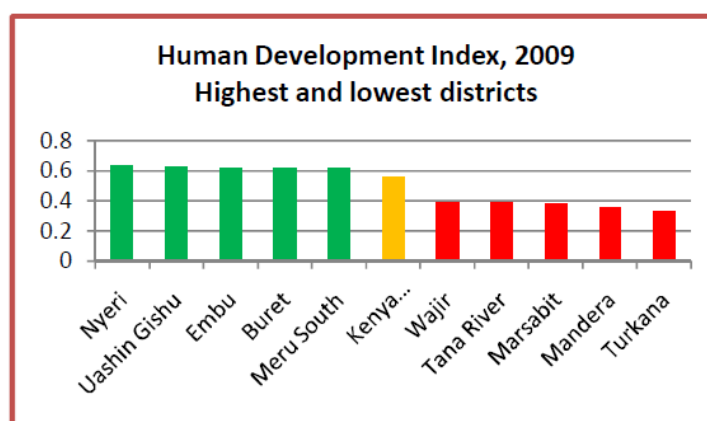


Figure 4:

A girl in North Eastern Province is 15 times more likely to be out of school than a girl in Nairobi

Source: UWEZO Kenya, 2011: Are our Children Learning? Annual Learning Assessment Report, 2011

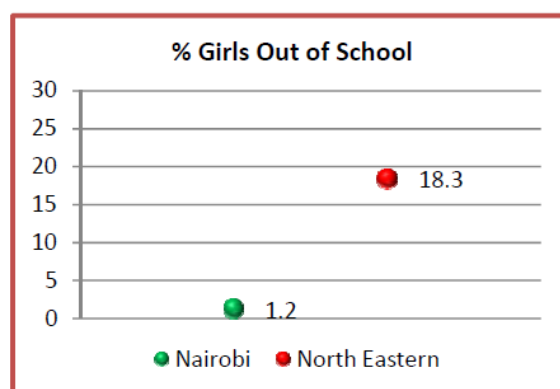
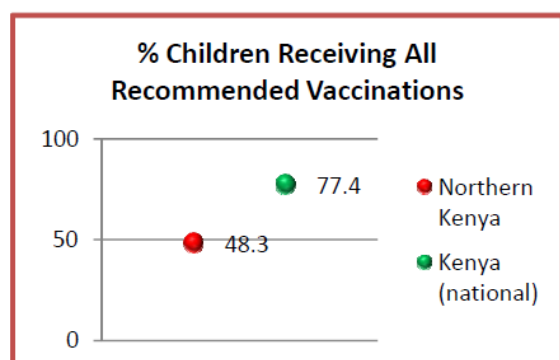


Figure 5:

Children in Northern Kenya are more than a third less likely to receive all their recommendation vaccinations than other children in Kenya

Source: UNICEF Kenya, 2011: Northern Kenya Social Policy Data Summary, based on the Kenya Demographic and Health Survey 2008-2009



Source: Copied from the ASAL Secretariat Document, 2012

2.1.2 Uganda

The greatest incidences of poverty-greater than 60 per cent of the population living below official rural poverty line -are found across the north (WRI, 2008).

2. 2 Access to basic services and infrastructure

2.2.1 Education

A rapid expansion of education is probably the highest return on investment for positively diversifying the economy (Healey, 2012).

2.2.1.1 Kenya

The dropout rate at primary level in 2007 in the north was nearly twice the national average: 6.6% as against 3.5%. Only 42.3% of students in the north completed their primary school cycle in 2007, compared with 81% nationally⁹. Northern Kenya also has the lowest ratios of trained teachers to pupils, lowest performance in the national examinations, and lowest rates of transition to university.

Table 1: Lack of infrastructure and service provision in North Eastern Province compared to national average, Kenya 2009 (Kenya Country paper)¹⁰

Service provided	North eastern (%)	National average (%)
Primary education net enrolment	36.3	93
Girls completion rates in primary school	25	75
Secondary education net attendance	2.2(2003)	12.5
Electricity at home	3.2 (2003)	16.0
Access to safe drinking water	9.9 (2003)	56.3
Women using antenatal care	31.7 (2003)	89.9
Vaccinated children (12-23 months old)	48	77

In the 7 counties most affected by the 2010-2011 droughts, the gross secondary school enrolment ratio was 16 per cent for girls, compared to 23 per cent for boys compared to a national level of 49 per cent and 54 per cent respectively (World Bank, 2011 p.5).

2.2.1.2 Ethiopia

A study by the Save the Children UK found that dropout rates in Ethiopia were based on information from settled populations so it is not representative. CARE study 2007 – similar problems

⁹ Sara Ruto, 2009: 'Education on the Margins', unpublished background study for UNESCO

¹⁰ HPG (2010) Pastoralism demographics, settlement and service provision in the Horn and East Africa, REGLAP. http://www.disasterriskreduction.net/fileadmin/user_upload/drought/docs/pastoralism_Demographic%20trends_%20settlement%20patterns%20and%20service%20provision.pdf

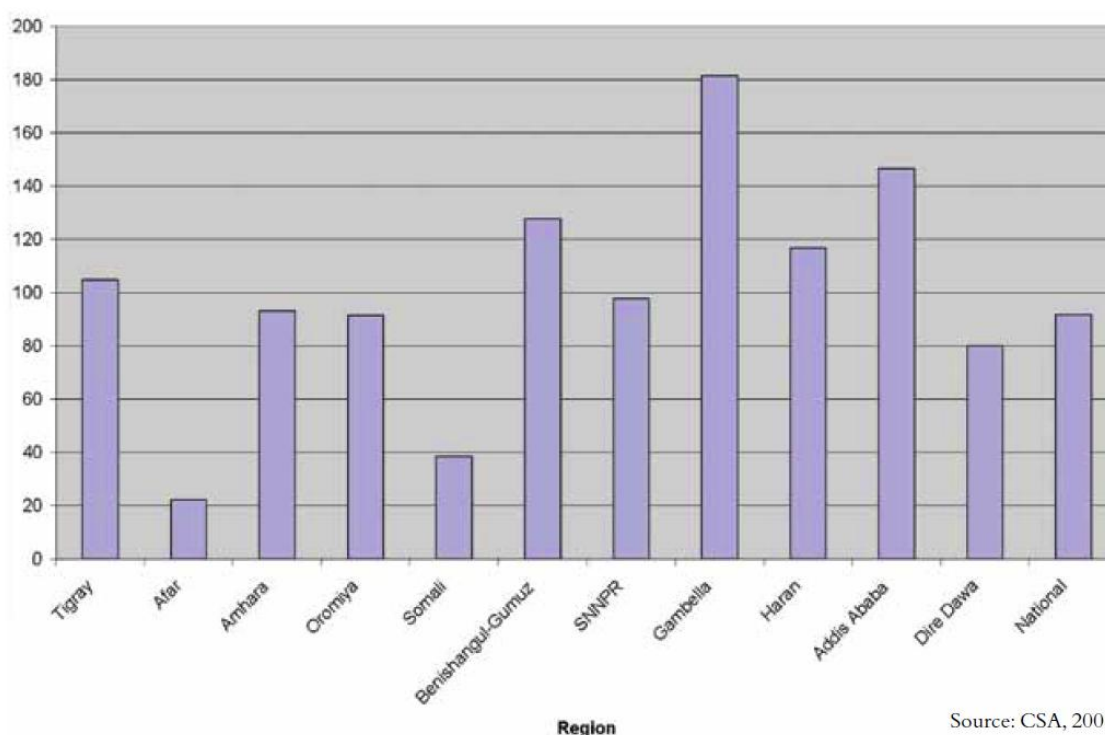
Table 9: Students enrolled in primary and secondary schools, Afar and Somali Regions, Ethiopia, 2002-2008

Region	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
Afar	34,876	38,669	46,175	57,537	59,148	71,856
Somali	130,276	130,276	201,150	201,150	201,150	387,644

CSA Education Data, 2002/03-2007/08

Source: Little, P. et al. (2010). *Future Scenarios for Pastoral Development in Ethiopia, 2010-2015*. Pastoral Economic Growth and Development Policy Assessment, Ethiopia

Figure 7. Gross school enrolment in Ethiopia by region, 2006 to 2007



Source: CSA, 2008.

Note: Enrolment for Tigray, Harar, Benishangul-Gumuz, Addis Ababa, and Gambella is more than one hundred percent due to the time difference between census and the data collection.

Gross school enrollment rate for Afar 21%, Somali 39% compared to national average of 90%

Table 7. Educational attainment in Somali Region

Area	Proportion of males with no educational attainment	Proportion of females with no educational attainment
Ethiopia national	52.4%	66.8%
Somali Region	82.4%	88.8%

Source: Kipuri and Ridgewell (2008).

2.2.1.3 Uganda

In Teso, Uganda (an agro-pastoral area), 50% of female livestock farmers had no formal education compared to only 17% of men (Essenu and Ossiya undated cited in Flintan, 2011).

2.2.2 Health and Nutrition

2.2.2.1 Uganda

Health Indicator	Household(s)% in Karamoja
Global Acute malnutrition rate	8.1%
Food insecure households December 2011	8.2% ¹¹
Children receiving unacceptable diets ¹²	83.0%
Exclusive breastfeeding	56.6%
Borderline households	33.4%
Acceptable households	55.4%

Source: Nutrition Surveillance, Karamoja Region, Uganda Round 7, December 2011

“Cultivation remains the main source of food in Karamoja, with the exception of Moroto where purchasing of food is the main source. Across the livelihood zones, children from agro-pastoral and pastoral communities mainly consumed two meals per day. Agricultural communities provided a higher frequency of meals to children as per day” (National Surveillance, 2011). UNICEF (2012) statistics indicates that infant mortality rate (under 1) was 63, while life expectancy at birth was 54 years in 2010. The report also shows that under 5 mortality was 99 out of 1,000 during the same year (UNICEF, Country Statistics, 2012).

Figure: Karamoja child and maternal healthcare (2010)

Infant mortality rate per 1,000 births	105
Under 5 mortality rate, per 1,000 births	174
Total fertility rate	7.2
Women using modern contraceptives	0%
Births with skilled birth attendants	18%
DPT3 coverage in children (12-23 months)	66%
Under 5 stunted children	54%

Source: Health Sector Strategic & Investment Plan 2010/11 – 2014/15, Ministry of Health, GoU, 2010

¹¹ This is a tremendous decrease from 15.5% in September 2011. (Nutrition Surveillance, Karamoja Region, Round 7, December 2011 http://www.actionagainsthunger.org/sites/default/files/publications/DHO-ACF_Karamoja_Nutrition_Surveillance_Round_7_Final_report_12_2011.pdf)

¹² Combined dietary diversity and frequency of meals

2.2.2.2 Kenya

“On average, about 60 per cent of all deliveries nationally take place at home, but in the Northern parts of Kenya, that number is at more than 90 per cent. Sadly, statistics indicate that Northern Kenya could be having maternal mortality rate of over 1,000 per 100,000 live births” (UNICEF 2009).

2.2.2.3 Ethiopia

Table 11. Proportion (%) of women who had a live birth in the previous five years and received antenatal care for the most recent birth, Ethiopia, 2005

Region	Health professional	Trained traditional birth attendant	Traditional birth attendant/other	No assistance
Tigray	35.3	0.4	1.8	62.5
Afar	15.0	1.7	0.3	83.0
Amhara	26.5	0.2	0.3	73.1
Oromiya	24.8	0.2	0.4	74.5
Somali	7.4	0.0	0.4	92.0
Benshangul	24.5	0.2	0.2	74.3
SNNPR	30.3	0.4	0.7	68.5
Gambella	36.6	0.6	1.6	61.0
Harari	40.7	0.9	0.4	58.0
Addis Ababa	88.3	0.3	0.0	11.5
Dire Dawa	52.9	0.0	1.4	45.7

Source: Somali Regional State Health Bureau, 2010.

Table 8. Regional distributions of health facilities and ratio to population, 2003 to 2004

Region	Number of people per hospital	Number of people per health centre	Number of people per health post	Number of people per private clinic
Tigray	342,750	128,531	25,079	137,100
Afar	665,000	147,778	22,542	443,333
Amhara	1,067,235	157,765	16,084	103,674
Oromiya	865,448	150,287	57,041	51,012
Somali	684,833	241,706	42,361	2,054,500
Ben-Gumz	297,000	59,400	9,900	59,400
SNNPR ³	880,313	110,906	17,584	91,461
Gambella	234,000	29,250	5,571	33,429
Harari	37,000	92,500	26,429	9,737
Addis Ababa	93,500	103,889	35,962	7,248
Dire Dawa	123,333	74,000	16,087	18,500
National	564,016	136,929	24,514	54,708

Source: CSA and ORC Macro, 2006.

Table 9. Estimated health service coverage and utilization by region, 2003 to 2004

Region	Population	Potential service coverage (%)	Outpatient visits per capita
Tigray	4,113,000	83.4	0.77
Afar	1,330,000	72.9	0.75
Amhara	18,143,000	46.9	0.37
Oromiya	25,098,000	60.9	0.38
Somali	4,109,000	43.6	0.09
Ben-Gumz	594,000	198.7	0.69
SNNPR	14,085,000	75.6	0.15
Gambella	234,000	226.5★	0.10★
Harari	185,000	148.7	0.84
Addis Ababa	2,805,000	86.5	0.47
Dire Dawa	370,000	100	0.34
National	71,066,000.00	64.0	0.36

Source: CSA and ORC Macro, 2006.

Table 10. Child vaccination coverage in Ethiopia by region for children aged 12 to 23 months, 2005

Region	Proportion (%) of children receiving full vaccination course					Proportion (%) of children with no vaccination
	BCG	DPT	Polio	Measles	All diseases	
Tigray	77.4	51.6	56.6	63.3	32.9	7.2
Afar	27.6	2.8	19.9	8.1	0.6	38.8
Amhara	62.3	31.5	45.6	34.8	17.1	20.6
Oromiya	57.8	28.5	41.1	29.4	20.2	25.5
Somali	17.1	5.6	10.2	6.4	2.8	78.0
Benshangul	53.5	30.7	36.7	33.4	18.5	28.5
SNNPR	64.2	33.2	50.2	37.7	20.3	21.7
Gambella	49.3	20.3	41.4	30.7	15.9	31.9
Harari	67.4	45.8	52	39.9	34.9	23.7
Addis Ababa	93.5	83.8	85.5	78.8	69.9	2.3
Dire Dawa	75.4	61.4	65.1	55.7	43.4	18.2

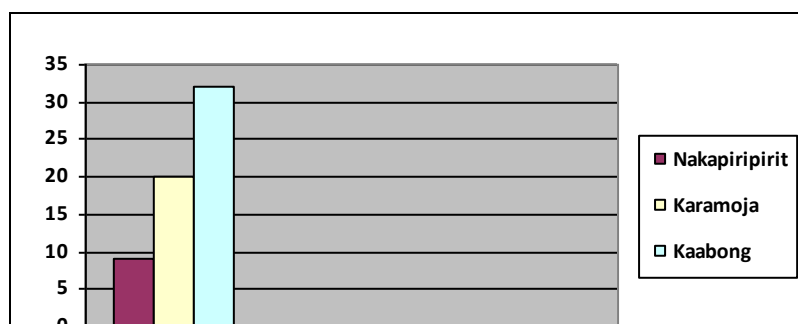
Source: CSA and ORC Macro, 2006.

2.2.3 Water, Sanitation and Hygiene (WASH)

2.2.3.1 Uganda

Reports indicate that water is sourced mainly by boreholes in Karamoja (84.2%). “Most households across the region do not use any water treatment methods (93.9%); some of water treatments like boiling, solar and use of disinfectants was registered across the region. Kaabong reported the highest treatment of water across the districts (15.0%). The disposal of human waste in the bush remains the main practice in Karamoja (67.8% of Households). Latrine coverage in Karamoja is at 7% (p.-3) (Nutrition Surveillance Karamoja, Region, Uganda, Round 7, December 2011 pp.21-22).

Time taken to borehole



Source: Nutrition Surveillance Karamoja Region, Uganda, Round 7 December 2011

Table: HDI indices for the worst performing districts in Uganda, highlighting the concentration of poverty in those districts with significant pastoral populations¹³

District	Dominant pastoralist/non-pastoralist populations	HDI (national average 0.505), 2002
Moroto	Pastoralist	0.216
Kotido	Pastoralist	0.292
Abim	Pastoralist	0.292
Kaabong	pastoralist	0.292
Nakapiripirit	Pastoralist	0.370

2.2.3.2 Ethiopia

Public investments in roads in Ethiopia have reduced poverty by 7% (Kenya Government Vision 2030 annex).

3.1 Drought

3.1.1 Regional

In the Horn and East Africa drought affects more people, more frequently than any other disaster. In Kenya for example, drought accounts for 8 out of the 10 top disasters in the last 20 years with the other 2 being floods) and has affected more people and led to more deaths and economic losses than any other hazard.¹⁴

3.1.2 Kenya

Between 2008- 2011 droughts cost US \$12.1 billion (Kenya Post Disaster Needs Assessment, 2012). Kenya is also estimated to have lost livestock worth \$77million in 1999-2001, while distributing food aid worth \$200million. Severe drought/floods estimated to cause an annual reduction in GDP of 2.4% (Country Programme Paper, 2011 p.1). Kenya has recorded drought related food insecurity in 1928, 1933-34, 1937, 1939, 1942-44, 1947, 1951, 1952-55, 1957-58, 1984-85, 1999-2000, and 2003-2005 2006, 2009 and 2011. In addition major floods occurred in 2006 and 2010. The 1983-84 and 1999-2000 droughts are recorded as being the most severe resulting in loss of human life and livestock, heavy government expenditure to facilitate response and economic losses of unprecedented levels.

¹³ UNDP (2008) Human Development Report 2007/8: *Fighting Climate Change – Human Solidarity in a Divided World*

¹⁴ <http://www.preventionweb.net/english/countries/statistics/?cid=59>

Table 2: Droughts in Kenya in the last Decade

Major drought events	GoK and International Humanitarian Aid Received (US\$)*	Number People Affected**
2011	427.4m	3.75m
2009	423m	3.79m
2006	197m	2.97m
2003/2004	219.1m	2.23m
1998-2001	287.5m	2.36m

*UNOCHA financial tracking service and GoK figures

** Kenya Food Security Steering Group (GoK)

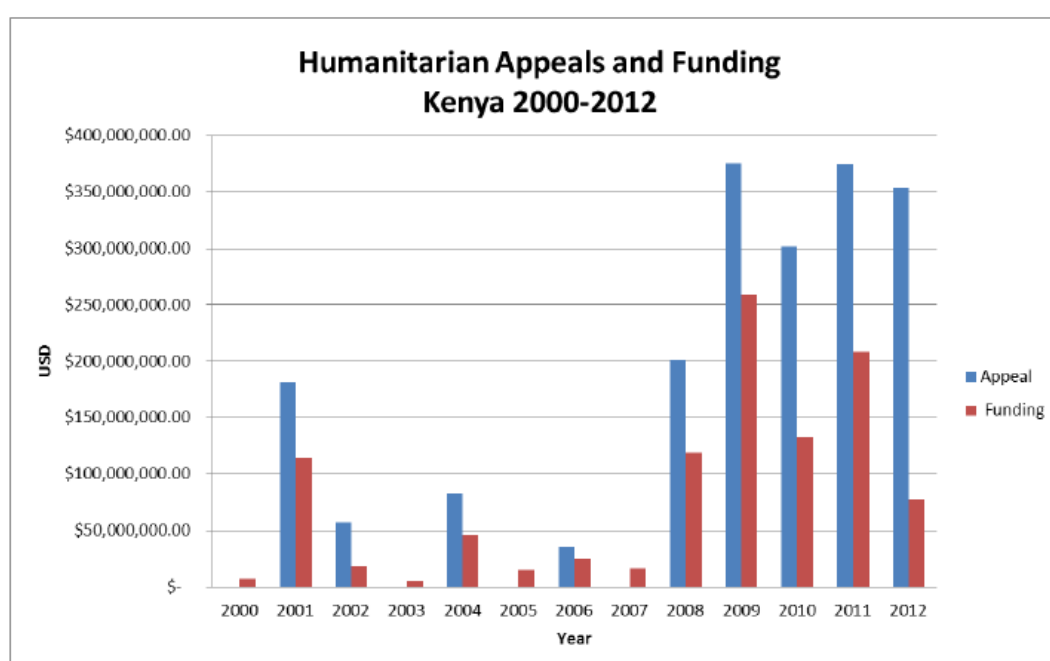


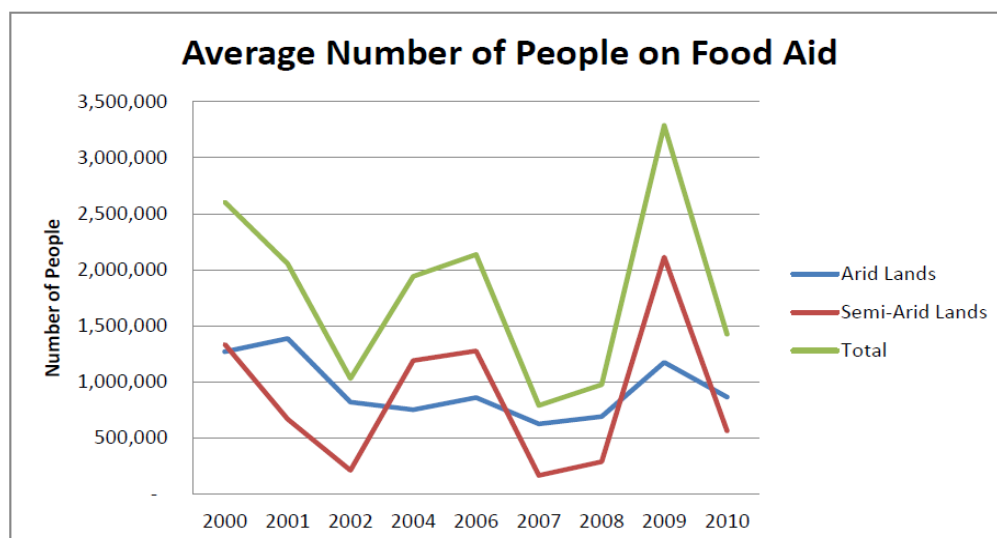
Figure 4: Humanitarian Appeals and Funding

Source: UN OCHA Financial Tracking Service data

OCHA has estimated that GoK allocated Ksh18billion (US\$219m) to drought response in 2011. Between 1999 and 2010 the Kenyan Government spent an average of USD 173.2 million each year on food and non-food emergency operations. In addition the WB and other donors channelled over US\$125m assistance via the Arid Lands Resource Management Project (ALRMP).

The Stockholm Environment Institute's study on Kenya estimated that existing climate related shocks cost the country as much as \$0.5 billion per year, equivalent to around 2% of GDP. Given drought frequency is unlikely to decrease it is safe to assume repeated humanitarian appeals and responses will occur every 3-4 years.

Figure 5: Populations assessed as in need of food assistance 2000-2010



Source: Ministry of Northern Kenya

Extracted from Fitzgibbon, C. (2011). *Economics of Resilience: Kenya Country Report* p.10

General plans to improve agriculture and water make little separate or specific reference to the additional costs or challenges faced by the ASALs and their vulnerability to drought. The current political division of Kenya into, some very large and heterogeneous, provinces, means the statistics and needs of the ASAL areas do not emerge very clearly in many national policies and plans. Only North Eastern Province is wholly arid. The stark differences in social indicators for this province are clear but it is also the least populated province. When national budgets are being developed there is a strong tendency to allocate funds to districts on the basis of population. Although there has been some effort to prioritise CDF and LATF budgets to the poorest areas (which includes arid districts) these additional funds are actually very small when compared with Government's annual revenue spending in a less vulnerable location. For example Turkana District (population 855,399) has received Ksh 813m (US\$9m) from the CDF in total since 2003. This barely equates to the education budget for much wealthier Baringo District (population 555,561) for a single year.

Despite the high profile of drought emergencies in Kenya even international donor funding is also inherently skewed towards non-ASAL areas. For example USAID is by far the largest humanitarian donor to Kenya providing over US\$231million to the drought crisis in 2011 (the majority of this was for food aid). It can be assumed the majority of this was directed to the ASAL areas (which also includes refugees in Kenyan camps). Although this represented 33% of the total international response it still represents less than 20% of total US funding to Kenya that focus, almost exclusively on the high potential areas. For example USAID spends over US\$500m per year on HIV/AIDS in Kenya which is primarily focused on the non-drought affected high potential areas (Fitzgibbon, 2011).

A review of bilateral overseas development assistance (ODA) to Kenya in 2009-2010 shows that humanitarian assistance accounted for approximately 15% of all assistance. The vast majority of this is likely to be focused on the ASALs; however the proportion of this expenditure that can be considered 'resilience-building' rather than humanitarian response is likely to be tiny. Further research is required to assess more clearly where aid to sectors such as economic infrastructure and services, education, health and population, which account for the vast majority of ODA, is actually spent. It seems that most likely these funds focus on the high potential and highly populated parts of Kenya, not the sparsely populated drought affected margins.

Food aid normally accounts for over half of all humanitarian appeal funding to Kenya. It is consistently the best funded sector. In 2011 WFP received 84% of the funding required for food aid. Currently DFID is supporting the Ministry of Northern Kenya to implement the second phase of the Hunger Safety Net Programme (HSNP) which has been providing regular cash transfers of Ksh2, 100 (approx. \$25) to 60,000 households in northern Kenya every six weeks for the last 3-4 years.

Failure to maintain adequate supplies of water to drought affected communities lead to some of the greatest financial and other costs of drought in terms of human and livestock mortality. The recent WESCOORD annual report listed all emergency WASH expenditure provided by the GoK and other agencies during the 2011 drought. In total GoK provided nearly Ksh. 1.2 billion (US\$14 million) in emergency water assistance which is twice that provided by the international community (US\$7.2m). If total emergency WASH expenditure (approximately US\$21.2 million) is divided by the total population of the 11 priority drought affected greater districts (total population 4,976,500) this gives a crude annual average cost of US\$1.87 per head. Clearly this cost only includes that recorded as emergency response and is divided by the entire population of the drought affected districts although only a small proportion benefited.

3.1.3 Ethiopia

There are, currently, 132 pastoral and agro-pastoral *woredas* (districts) in different regions of Ethiopia. Most of these *woredas* are located in very remote and marginalized areas of the country. They are characterized by poor social and economic infrastructures and services. Moreover, they are highly vulnerable to both natural and human induced disasters. The total population in these *woredas* is estimated to be 12-15 % of the country's total population (PCDP II PIM 2008). Following normal to above normal *kiremt* 2011 rains, the *meher* crop production is estimated to be better than 2010 and the long-term average in most parts of the country. The rains also improved water and pasture availability in many areas. The food security situation, however, remains of concern in areas that received inadequate seasonal rains especially the southern and south eastern lowlands, which are mostly inhabited by pastoralists. Despite improved water availability in most places, the rains have not been

sufficient enough in some pocket areas to fully replenish water sources as the dry season (January to mid March) progresses. Increase in food prices have also negatively impacted the purchasing power of affected households and the overall food security situation.

Overall, the nutritional situation improved and stabilized in almost all affected areas by the end of 2011, in comparison to the first half of 2011, particularly to the peak in May. Looking at TFP admission trends in previous years, a nationwide increase in TFP admissions is expected in the first half of 2011, partly due to the expansion of the Outpatient Therapeutic Programme (OTP). The findings of the multi-agency assessment, which was conducted in November 2011, and the subsequent monitoring results, though not disaggregated based on Livelihood systems, indicate that approximately **3.2 Million** people require relief food assistance in the country in 2012. Of these, **1,260,995 (39%** of the total affected population) are from Afar and Somali regions which are predominantly pastoral and agro-pastoral communities. The total net emergency food and non-food requirement for the period January to June 2012 amounts to **168.7million USD**. The net food requirement, stands at **365,612MT**, estimated to cost around **USD 122.3million**. In addition, a total of **USD 46.4million** is required to respond to non-food needs of identified beneficiaries in the health and nutrition, water and sanitation and agriculture and education sectors (HRD 2012).

Summary of Humanitarian Requirements (USD)-2012

Sector	Total Requirement	Available resource	Net Requirement
General Ration: Gross: 365,612 296,042MT Cereals, 31,084MT blended food, 29,604 MT Pulses, 8,881 MT Oil NET MT 158,832	281,521,240	159,220,600	122,300,640
Supplementary (EOS/TSF) Food: Gross: 9,712MT Net: MT9,712	11,292,192	24,644,657	-
FOOD SUB TOTAL	292813432	183,865,257	122,300,640
Health and Nutrition	24,831,453	11,325,296	13,506,157
Water and Sanitation	23,572,168	11,212,172	12,359,996

Sector	Total Requirement	Available resource	Net Requirement
Agriculture	15,455,453	1,375,356	14,080,097
Education	6,500,000	6,500,000	
Non Food Total	70,359,074	23,912,824	46,446,250
GRAND TOTAL	363,172,506	207,778,081	168,746,890

Source: Ethiopian Humanitarian Requirement Document January 2012

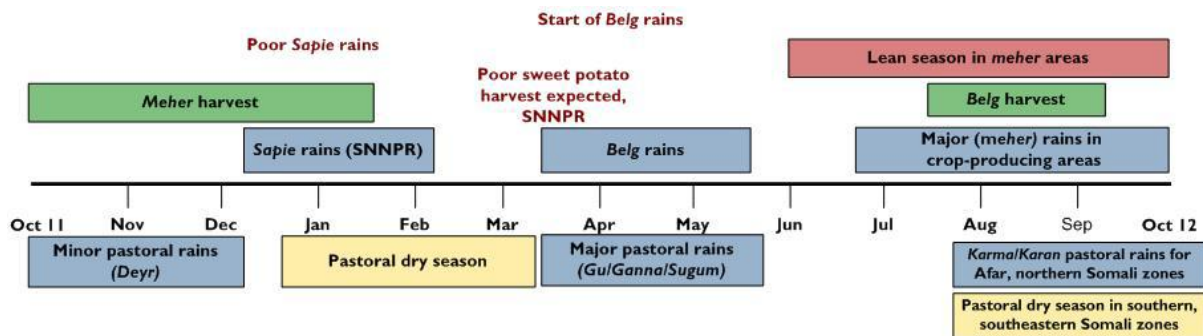
Table: Affected population and Relief Food Requirement by Region January–June 2012

Region	Beneficiary Number (as endorsed by the region)	Cereal	Supplementary food	Oil	Pulses	Total
Tigray	346,202	31,158	3,272	935	3,116	38,480
Afar	145,189	13,067	1,372	392	1,307	16,138
Amhara	331,617	29,335	3,080	880	2,933	36,229
Oromiya	1,093,427	94,395	9,912	2,832	9,440	116,578
Somali	1,115,806	110,738	11,627	3,322	11,074	136,761
SNNPR	97,830	7,112	747	213	711	8,784
Benishangul Gumuz	33,432	3,009	316	90	301	3,716
Gambella	48,100	4,260	447	128	426	5,261
Harari	4,000	360	38	11	36	445
Dire Dawa	28,972	2,607	274	78	261	3,220
Grand Total	3,244,575	296,042	31,084	8,881	29,604	365,612

Source: Humanitarian Requirement Document 2012

Seasonal Calendar

(Attached for your reference on Ethiopian names of seasons (*kiremt* and *meher*) critical events time line)



4. Impact of climate change

A recurrent question is the extent to which droughts are becoming more frequent or more intense. Some argue that examination of long term rainfall patterns and NDVI data for Kenya show the frequency of drought and erratic rainfall has not changed (see figure 2 below). However there is also evidence that climate change has already caused a rise in average temperatures, see figure 3 below for Turkana. The impacts of this are predicted to affect countries such as Kenya more intensely than other world regions, because of their higher vulnerability and lower adaptive capacity⁵. One implication is that even if rainfall stays the same evapo-transpiration rates will increase. For ASAL areas this is likely to reduce the growing seasons for pastures and mean water sources are likely to dry up sooner. Climate change experts agree that the real impact of rising temperatures will only become apparent in the longer term (20-50 years). The impacts must be viewed in the context of the affected populations' vulnerability, for example land-use patterns, rising populations, ability to diversify incomes etc. It seems clear that even if the intensity of droughts is not increasing currently, the economic, social and other impacts on Kenya are increasing.

Figure 2: Rainfall variability in the East Africa region, from 1900 - 2000. (Graph: Brad Lyon, ILRI)

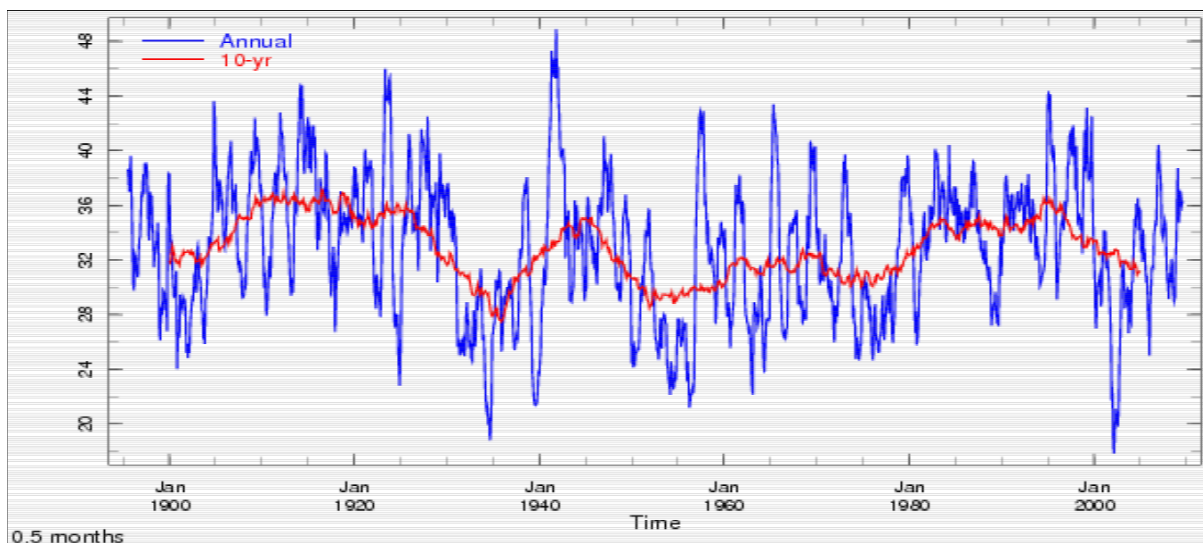
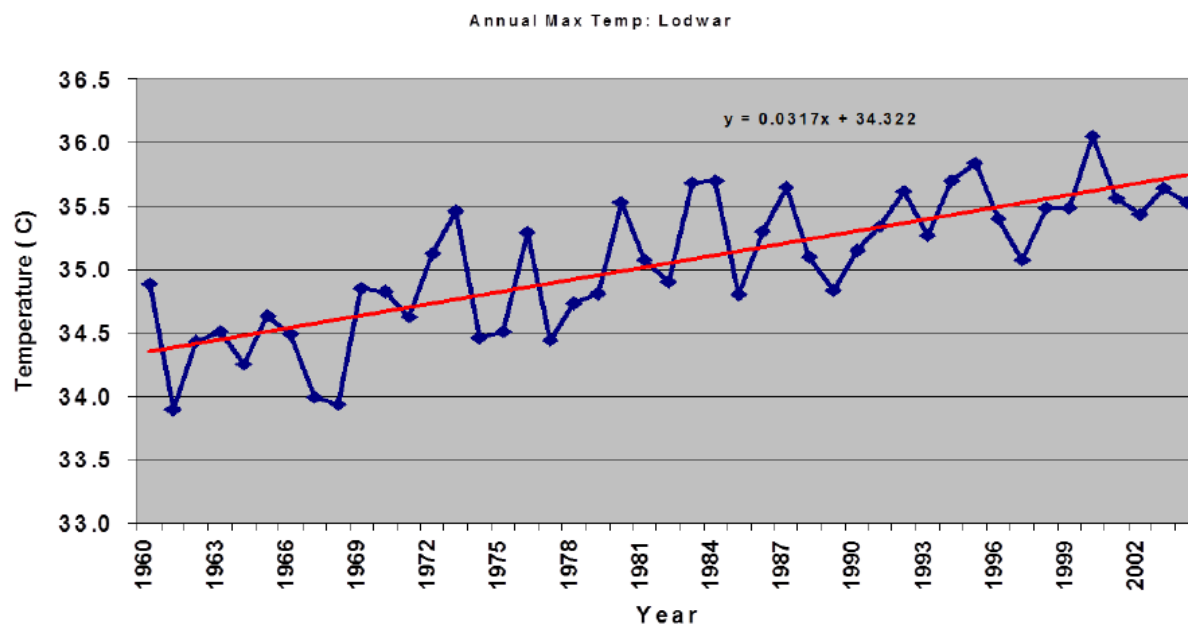


Figure 3: Temperature Change in Lodwar, Turkana, Northern Kenya (Source: Kenya Meteorological Office)



5. Livestock situation

5.1 Contribution of pastoralism to national economies

Factor	Ethiopia	Kenya	Uganda	Tanzania
Contribution of livestock to GDP	Between 9% and 16% ¹⁵	12% (Kenya country paper)	3.2% (IGAD-LPI)	6%
Contribution of tourism to GDP		12% (vision 2030 annex)		
Contribution of livestock to agricultural GDP	30-35%	40% (vision 2030 annex)		30%
Value of the pastoralist sector	-	US \$800million (livestock 550)		

¹⁵ Little, R et al, (2009) *Retrospective Assessment of Pastoral Policies in Ethiopia, 1991-2008* and WISP (Worldwide Initiative for Sustainable Pastoralism). 2006. *Pastoralism in Ethiopia: Its total economic values and development challenges*. Nairobi, Kenya: WISP Programme, IUCN. This is a higher estimate based on undervaluing of milk and leather goods in the original Government estimates of 9% from the *Pastoral Development Study (PaDS)*, 2004, Ministry of Agriculture and Rural Development (MoARD)

(\$)		CELEP primer		
% of national herd made up of indigenous breeds				
% of milk production from pastoral herds				

5.1.1 Ethiopia:

The Government of Ethiopia GTP recognizes the current contribution of livestock to GDP and potential future contribution to national economy. This provides an important entry point for strengthening the livestock sector and pastoralism. The GTP sets ambitious targets increasing export earnings from live animals and meat exports combined, from US\$125 million in 2009/10 to US\$1 billion in 2014/5. Trends in livestock and meat exports are largely attributable to extensive, mobile pastoralist production systems.

Pastoralists are contributing to the national economy in form of domestic and international export of livestock and livestock products. The livestock sector contributes 12-16% of the Ethiopia GDP and 30-35% of the agricultural GDP. In Ethiopia, livestock GDP in the pastoralist and drought-prone highland areas (roughly corresponding to the arid and semi-arid zones) is about 15 percent of national agricultural GDP. About 50 percent of livestock value added comes from these zones; overall, livestock accounts for about 30% of national agricultural GDP (results from the 2005/6 Ethiopia Social Accounting Matrix in IFPRI). According to the Ministry of Agriculture report (2010) 22% of country's cattle population (10.36 million heads), 40.7% of sheep (13.6 million heads), 60% of goats (8 million heads) and 100% of camels (2.5million) are found in the pastoral areas of the country. Livestock production was worth 69.5 billion Birr between 2008 and 2009 (Benke).

Table 4. Contribution of livestock to annual household income in pastoralist areas, Shinile Zone

Wealth group	Total annual income (EB) from livestock/total income (%)	
	1998-1999	2004-2005
Better-off	6050/7000 (86%)	9300/9300 (100%)
Medium	3978/4350 (91%)	5800/6200 (94%)
Poor	1980/2200 (90%)	2200/3950 (56%)

Source: DPPA/SCUK, 2002, 2008.

Table 14. Changing livestock ownership by wealth group among Somali pastoralists in Erer and Ayisha Districts, Shinile Zone, over a 60-year period (1944-2004)

Wealth ranks over time	Average livestock ownership per household (n=300)				
	Cattle	Sheep	Goats	Camels	Donkeys
30-year period before 1974:					
- wealthy households	400	200	250	50	20
- medium households	200	100	150	20	10
- below-medium households	80	50	80	10	5
30-year period after 1974:					
- wealthy households	100	350	500	120	10
- medium households	50	150	300	60	5
- poor households	3	10	22	1	2
- very poor households	0	5	12	0	1

Source: Kassahun et al., 2008.

The livestock sector in Ethiopia ranks second to coffee in generating foreign exchange. In 2006 Ethiopia earned US\$121 million from livestock and livestock products (National Bank of Ethiopia Database in IIED and SOS Sahel 2010).

Due to in-migration and change in livelihoods many of those living in the drylands may be considered more 'agricultural' in nature (MOFED 2006) however the areas remain dominated by pastoralists who produce around 7.05 million heads of goats (around 73% of the country's herd), 4.25 million sheep (25% of country's herd), 7.70 million cattle (20%), and 1 million camels (MOARD 2008).¹⁶ Pastoral areas not only meet most of the domestic meat demand but also are the main suppliers of livestock for

¹⁶ Note these are government estimates so it is possible that these numbers/proportions are higher in reality. For example slightly different though older figures are provided by Ahmed et al 2002 in Ali Hassen 2008: 40% (10,850,000) of the national cattle herd, one quarter of the sheep (10,240,000), three quarter of goats (7,700,000) and nearly all camels (2,541,000) as well as equines (700,000).

export, generating about US\$ 50 million per annum for Ethiopia (Yacob Aklilu & Catley 2010b). They also supply oxen for traction, manure, and skins and hides. In 2004, pastoral systems contributed to 9% of GDP (PADS 2004). Despite this, many of the pastoral areas are defined as areas of high food insecurity (Teklie 2010).

5.1.2 Kenya

A recent assessment by IGAD¹⁷ estimated that the contribution of ruminant livestock to national agricultural production is actually 150% higher than previously thought at Ksh 319 billion (US\$3.8bn) (IGAD LPI Brief 11, 2011). Domestic and export demand for meat is high and unlike neighbouring countries such as Ethiopia, Sudan and Somalia, Kenya is a livestock importer rather than an exporter. An estimated 22% of the nation's beef is supplied by cattle walked across Kenya's borders.

Table 1: Livestock Populations in Kenya

	Total Population from 2009 Census	ASAL Population	Highland Population
Cattle	17,467,774	12,155,974 70%	5,311,800 30%
Sheep	17,129,606	14,354,925 87%	2,174,681 13%
Goats	27,740,153	25,250,865 91%	2,489,288 9%
Camel	2,971,111	2,968,670 100%	2,441 0%

Source: Contribution of Livestock to the Kenyan Economy; 2011;IGAD

5.1.3 Uganda

The livestock sub-sector contributes about 9% of the country's GDP (MAAIF 2002). Ruminants constitute 86% of total livestock (ibid) and are kept by pastoralists living in the rangelands, which support 90% of the cattle population. About 85% of the total marketed milk and beef in the country is produced from indigenous cattle, which feed on rangeland pasture. Goats and sheep have an untapped export potential to the Middle East. Hides and skins have for long been important sources of foreign exchange for the Ugandan economy (Kisamba-Mugerwa 2001).

Currently, national statistics indicate that pastoralists supply 90% of livestock products, compared to ranching and commercial dairy enterprises, which supply only 10%. Moreover, livestock, a pastoralist mainstay, has been having a positive impact on the country's GDP, after improving from

¹⁷ The Contribution of Livestock to the Kenyan Economy; R.Behnke and D. Muthami; IGAD LPI Working Paper No.03-11; 2011

1.6% in 2005/06 and doing better than all the sub-sectors in agriculture combined (see Table 1 below). These statistics amplify the significance of pastoralism to the national economy and to local livelihoods.

Household Livestock Ownership in Karamoja as of 2008:

Livestock	Exotic	Local
Cattle	8,820	2,245,140
Goats	20,827	2,014,144
Sheep	7,840	58,360
Chicken	7,730	1,355,090
Other poultry: 82, 080		

Source: The National Development Plan, 2010, pg.80.

Livestock contributes 3.2% to National GDP. “The livestock owners of Karamoja therefore constitute about 2.4% of the national population, but these people own about 20% of the nation’s cattle, 16% of its goats, nearly half of all sheep, over 90% of the donkeys and virtually all camels (UBOS 2009). If we apportion gross national livestock output strictly by regional herd sizes, Karamoja produces just under 20% of Uganda’s livestock output by value. In other words, 2.4% of the nation’s population produces a fifth of the nation’s livestock wealth, and has likely done so for some time” (IGAD, *Contribution of Livestock to the Ugandan Economy, IGAD LPI Working Paper No. 02 – 12, pg. 30*)

Table: GDP Growth by economic activity at constant 2002 prices

	2005/06	2006/07	2007/08	2008/09	2009/10
<i>Total GDP Growth at market prices</i>	10.8%	8.4%	8.7%	7.2%	5.8%
Agriculture, forestry and fishing	0.5%	0.1%	1.3%	2.5%	2.1%

Cash crops	-10.6%	5.4%	9.0%	5.6%	-2.9%
Food crops	-0.1%	-0.9%	2.4%	2.6%	2.7%
Livestock	1.6%	3.0%	3.0%	3.0%	3.0%
Forestry	4.1%	2.0%	2.8%	6.3%	2.4%
Fishing	5.6%	-3.0%	-11.8%	-7.0%	2.6%

Source: Uganda Bureau of Statistics and MOFPED (2010)

5.1.4 Regional

Intra-regional trade on livestock is significant and growing – annual value greater than \$60 million. The livestock sector in non- OECD countries is growing at the rate of up to 7% per annum-much faster than the agricultural sector as a whole, and by 2010 it is predicted to be the most important sub-sector in terms of add value (Oxfam pastoral induction pack, Wekesa). Repeated studies have shown pastoralism in Africa to be between 2 and 10 times more productive than commercial ranching alternatives¹⁸

There was a 3 fold increases of livestock trade between 1991-2007 between Somalia and Kenya and 1997-2001 between Kenya and Ethiopia (COMESA policy brief No. 2, 2009). 90% of the meat consumed in East Africa comes from pastoralist herds. Livestock prices in region have stagnated in past 20 years and the producer share has declined, for example in Kenya 47-52% (CELEP primer on pastoralism).

5.2 Mobile versus sedentary livestock keeping

Mobile pastoral production supports significant numbers of people and contributes strongly to the economy contributing 10.6% of Ethiopia's export earnings (COMESA Regional Livestock and Pastoralist Forum 2009). It has increasing economic potential and it is worth noting FDRE ambition to increase formal meat exports tenfold in the next 5 years (FDRE 2010a). However, investment in this sector remains a small proportion of the overall agriculture budget and livestock issues are under-represented within MoARD (FDRE, 2010 SPIF). Modern and mobile (IIED) gives data showing increased productivity of mobile compared to sedentary herds both for meat and milk for example in Borana, Ethiopia mobile livestock production is 157% more productive than ranching in Kenya.

6. Irrigation

Most non-pastoralist livelihoods in ASALs yield lower incomes than pastoralism, with the exception of urban livelihoods and irrigated farming, which both have limited capacity to absorb growing

¹⁸ Davies and Hatfield, (2006). Global review of the economics of pastoralism

populations. Additional irrigation investments in pastoralist regions, for example, appear to be capable of **profitably absorbing only about 3 percent of the estimated pastoralist population in 2020** (Heady/IFPRI 2011). Migration is more promising, but only provided that it comes on the back of much larger investments in education and meaningful urban job opportunities. Healey

7. Land

The Government is leasing large tracts of land for foreign and national commercial investment, planning to transfer 3.3 million hectares of land to commercial investors by 2015 (FDRE, 2010 GTP). To date around 1.3 million hectares have been designated—the majority of which is found along the major rivers in pastoral areas – such as in South Omo where 180,625 hectares have been delineated in districts dominated by pastoral livelihood systems (Flintan, 2011). In Teso, northern Uganda for example where 80% of the land is owned by men, men dictate what to produce, how much and largely control the benefits (Esenu and Ossiya 2010).

8. Food prices

Food inflation rates in Ethiopia have been amongst the highest in Sub-Saharan Africa, and have increased rapidly from 2004 (monthly inflation rate of 3.4 per cent) to 2008 (to new high of 34.9 per cent) (Tadesse, 2011).

9. Investment Environment

9.1 Agricultural Investment/growth

9.1.1 Ethiopia

Livestock sector doesn't even receive the most basic support compared to major subsidies for coffee and tea (pastoral induction pack) (Elmi). The Ethiopian government has increased its expenditure on agriculture to 15% of the total national budget, above the 10% commitment made by member countries of the African Union in the Maputo Declaration (Oxfam calculations from IMF data, Oxfam June 2011). Whilst this level of investment by the Government on the agricultural sector is welcome, a closer look at type of expenditure and investment priorities are needed to understand impacts on food security. Indeed, 66% of the agriculture budget goes to the disaster risk management and food security sector, principally food assistance through the PSNP (FDRE 2010 PIF). While commercial farms can provide employment, wages are low: "Wage rates range from 10 to 20 birr per day which is about USD 0.60 to USD 1.20 per day" in (*GROW SP*). There are also risks associated with smallholder farmers switching from independent farming to work on commercial farms – they are likely to earn less overall, and would not be able to grow crops for their own consumption, decreasing their food security, and making them more vulnerable to food price rises or changes in investor's labour demands (Kostka and Scharrer, 2011).

9.2 Business Potential of ASALs

There are various investment sectors to be explored in the ASALs of Kenya, such as feed lots, abattoirs, transportation systems, veterinary services, weather insurance, hides and skin processing, utilities, renewable energy among others.

Business potential of Northern Kenya

Project Name / Description	Total Funding US\$ m	Possible NKIF investment US\$ m	Status
Water distribution and sewage disposal	13.5	5.0	Prospect
Independent power generator, Garissa	12.0	3.0	Tender
Clean energy	5.0	2.0	Prospect
Water bottling facility	4.0	1.0	Prospect
Waste collection services in Wajir, Mandera & Garissa.	0.2	0.1	Prospect
Enterprise development fund	10.0	4.0	Business plan
Livestock feedlot, biogas generation plant	2.5	1.0	Business plan in preparation
Livestock market	5.0	2.0	Business plan
Camel milk production	1.5	0.8	Business plan
Production seed and maize, Bura	1.5	0.5	Prospect
Mining of iron ore pebbles, Tharaka	3.0	1.0	Prospect
Eco-tourism lodge, Kapedo (Turkana)	2.5	1.0	Business plan
Conservancy tourism facilities	14.0	5.0	Prospect

Source: Northern Kenya Investment Fund presentation, December 5, 2012

10. Rangeland management and governance:

Ethiopia: According to the Government's own analysis, there is an 'institutional gap' with no formal organisation responsible for the development of the pastoral and agro-pastoral areas (FDRE 2010, PIF). There is therefore a need to find ways that local government, which may not have the capacity to administer the rangelands effectively, can work with traditional institutions to ensure effective governance and natural resource management. This may involve legal recognition of customary institutions, and agreement on the respective roles and responsibilities of state and customary institutions.

11. Food aid

Ethiopia, one of the largest recipients of international food aid over the past two decades, with some 800,000 tonnes received on average every year (Mousseau and Morton, 2010). Thus the humanitarian system in Ethiopia remains biased towards a food aid delivery approach that arguably mostly benefits rich country farming and shipping companies, and constrains humanitarian agencies from pursuing more flexible relief strategies like cash and voucher distributions or local purchasing (GROW Report). In-kind food aid has been used in drought response to the detriment of other often more appropriate interventions. Food aid does not meet many of the humanitarian needs caused by drought

(ECHO, 2010b); can distort markets acting as a disincentive for private sector (World Bank, 2005); is often not the most effective way of saving livelihoods (Wekesa, 2002); requires considerable supply and logistics capacity thereby increasing risk of delayed deliveries (IFRC 2011a; ACF, 2010; IRAM 2006); and may distort local food markets (Maunder, 2006). Yet food aid remains the best resourced type of humanitarian aid. However, where response is late or food is unavailable, food aid is important for saving lives and in the Ethiopian context has been essential to save lives and livelihoods over the years.

12. Gender

12.1 General

12.1.1 Uganda

In Teso, agro-pastoral communities' women contribute at least 50% of livestock production related labour and 60% agriculture (Esenu and Ossiya 2010, Flintan, 2011). For example UNHCR states that 80% of those who recently fled Somalia were women and children (Dico-Young, 2011a). From RMP consultation process in Karamoja, the table below summarizes the activities carried out during the year by the different sections of the community.

Table: Livelihood Activity by Season and Gender

Activity	Period done	Persons responsible
Cultivation	Wet season	Every body
Weeding	Wet season	Female youth and women
Watching the garden	Wet season	Every body
Harvesting	Wet season	Every body
Taking care of the animals	Dry and wet seasons	Male youth and men
Collecting building materials	Dry season	Every body
Watering animals	Dry season	Male youth and men
Hunting game and gathering wild fruits	Dry season	Every body

Source: Field consultative discussions, 2012

12.2. Representation of Women in Government

12.2.1 Ethiopia

In Ethiopia today, according to Hon. Nakiya Ankesa, there are 170 women parliamentarians. Hon. Nakiya is herself of pastoral background (from Dassenech in South Omo); however it is not clear how many more of the 170 are also from pastoral families. There have also been improvements in local government. For example in Somali region Ethiopia the participation of women in leadership positions in the government offices has increased. In Aysha district women hold about 25% of the positions. Among 12 line governmental bureaus three of them are held by women (Health; Women Affairs; and Labour and Social Affairs). At *kebele* level the Aysha town administrator is a woman. In Awbere district too, the participation of women in the council is 30% and a woman is a member of the executive council. Women head two of the 12 line governmental bureaus (Women's Affairs; and Capacity Building). These are significant improvements on the past (Tessema undated).

12.2.2 Uganda

In Uganda, there are said to be 105 women in parliament, which is a critical mass, though men still dominate. One of the most significant achievements so far, is the fact that the First Lady Ms. Janet Museveni is currently Minister of State of Karamoja Affairs. The Constitution of Uganda states that 1/3 of the membership of any established committees should constitute women.

12.2.3 Kenya

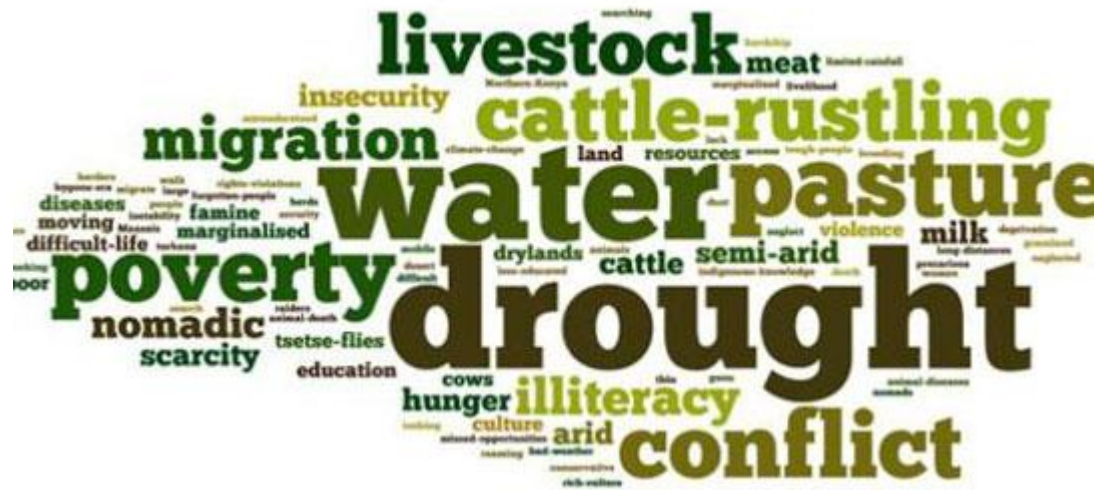
In Kenya, women account for slightly over half of the population (50.7%) and constitute a big voting block. 70% of public servants are from outside the ASALs (Government of Kenya, Vision 2030 Annex). According to Erick Patrick (personal correspondence), UNDP DDC, North Eastern region is far more likely to return MPs in elections because voting is done along clan lines rather than performance – can we get more info on this. In Kenya, 1/3 of all committees should be composed of women; however this was recently overturned by Parliament as unachievable (Flintan 2011).

13. Media reporting

In Kenya, the media in most cases portrays pastoralists negatively. According to a study by Shanahan, IIED, Kenyan pastoralists “tend to feature only in ‘bad-news’ stories – 93% of the media reports referred to conflict or drought. While 51% of stories that mention conflict presented pastoralists as a cause of problems, only 5.7% suggested that pastoralists might be the victims of the actions (or inactions) of others (e.g. farmers or government policies). An astonishing 22% of all articles referred to pastoralists as “invaders” or as having “invaded” land. Pastoralists have little voice. They were quoted in only 41% of the stories journalists wrote about them” (Shanahan Mike, 2012). “The media only gives special attention to

pastoralists when there is a crisis, like a major drought or famine where large numbers of people and animals have died” is a comment from a Kenyan journalist.

Words journalists associate with pastoralists in Kenya



Source: Mike Shanahan (2012). Why following the heard can be good for Kenyan media.

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ANNEX 2: KEY REFERENCE DOCUMENTS ON DRYLANDS RESILIENCE IN THE HORN OF AFRICA, SEPTEMBER 2013

Topics

- General
- Resilience in the drylands
- Emergency preparedness and response
- Contingency planning
- Natural resource management
- Participatory natural resource and rangeland management
- Land
- Rangeland management
- Livestock marketing
- Crop agriculture in the drylands
- Alternative livelihoods
- Private sector promotion
- Education
- Governance
- Human health
- Nutrition
- Gender
- Assessment methodologies
- Advocacy
- Consortium working

Document	Comments
<u>GENERAL</u>	
(Book): Pastoralism and Development: Dynamic Change at the Margins, 2012 , Catley, Lind & Scoones http://www.future-agricultures.org/events/future-of-pastoralism	Overview of key issues/research on pastoralism and its future Pastoralism has a future alongside alternative livelihoods
Pastoralism in the Horn of Africa: Diverse livelihood pathways, March 2012, CAADP www.future-agricultures.org/policy-engagement/policy-briefs/	
Priorities for investment in the drylands of the Horn of Africa , AU-IBAR: (not yet available)	Comprehensive overview of the history of the drylands and investment impacts, plus key priorities for investment
Investment Opportunities for Livestock in North Eastern Province of Kenya: A synthesis of Existing Knowledge, 2008 , RESaKSS http://mahider.ilri.org/handle/10568/187	Looks at different scenarios to increasing income, employment creation and reduction in food insecurity. Concludes that emphasis should be to focus on meeting domestic demand for livestock and create a favourable investment environment.
Moving up or moving out: A rapid livelihoods and conflict analysis in Mieso-Mulu Woreda , Shinile Zone, Somalia Region, Ethiopia, (2010), Catley and Iyasu http://sites.tufts.edu/feinstein/2010/moving-up-or-moving-out	Excellent analysis of the area using the SL framework with particular attention to conflict
Global review of the economics of pastoralism, 2006 Jonathan Davies and Richard Hatfield http://liveassets.iucn.getunik.net/downloads/global_review_ofthe_economicsof_pastoralism_en.pdf	Repeated studies have shown pastoralism in Africa to be between 2 and 10 times more productive than commercial ranching alternatives
Modern and Mobile: The Future of Livestock Production in Africa's Drylands, 2010 , IIED, ed Helen de Jode http://pubs.iied.org/pdfs/12565IIED.pdf	Gives data showing increased productivity of mobile compared to sedentary herds both for meat and milk e.g. In Borana, Ethiopia mobile livestock production is 157% more productive than ranching in Kenya
Strengthening information dissemination at community level: a disaster risk reduction and early warning information perspective, 2012 , KRDP/ASAL DM http://www.dmkenya.or.ke/downloads/reports/func-startdown/31/	
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Disaster risk reduction management in the drylands in the Horn of Africa: Brief prepared by a Technical Consortium hosted by CGIAR in partnership with the FAO Investment Centre, Fitzgibbon, C. And Crosskey, A. 2013	
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<i>RESILIENCE IN THE DRYLANDS OF THE HOA</i>	
Enhancing Resilience to Food Security Shocks in Africa, November 2012, Tim Frankenberger et al. http://www.fsnnetwork.org/sites/default/files/discussion_paper_usaid_dfid_wb_nov_8_2012.pdf	
Enhancing resilience in the Horn of Africa: An exploration into alternative investment options, 2012 (draft) Derek Headey, Alemayehu Seyoum Taffesse, Liang You International Food Policy Research Institute (IFPRI), Washington DC, USA & Addis Ababa, Ethiopia http://www.ifpri.org/sites/default/files/publications/ifpridp01176.pdf	Most non-pastoralist livelihoods in ASALs yield lower incomes than pastoralism, with the exception of urban livelihoods and irrigated farming, which both have limited capacity to absorb growing populations. Additional irrigation investments in pastoralist regions, for example, appear to be capable of profitably absorbing only about 3 percent of the estimated pastoralist population by 2020 . Migration is more promising, but only provided that it comes on the back of much larger investments in education and meaningful urban job opportunities. A rapid expansion of education is probably the highest return on investment for positively diversifying the economy.
Participatory development and the Capacity of Gabra Pastoralist communities to influence resilience, Aug 2009, Lance Robinson http://www.umanitoba.ca/institutes/natural_resources/canadaresearchchair/thesis/PhD%20Thesis%20Robinson%202009.pdf	Phd thesis looking at PISP areas in Northern Kenya: the importance of fostering real participation in building capacity for resilience

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The economics of early response and disaster resilience: Lessons from Kenya and Ethiopia (June 2012) Dfid: Courtney Cabot-Venton, Catherine Fitzgibbon, Tenna Shitarek, Lorraine Coulter and Olivia Dooley. http://www.dfid.gov.uk/Documents/publications1/Econ-Ear-Rec-Res-Full-Report%20.pdf	1) a comparison of the costs and benefits of humanitarian response versus resilience interventions and 2) Value for money of resilience - to help to begin to guide thinking on how to make the biggest impact.
Adaptation and resilience: responses to changing dynamics in Northern Karamoja , 2010, Stites https://wikis.uit.tufts.edu/confluence/download/attachments/38970072/Stites-and-Huisman_Adaptation-Resilience.pdf?version=1&modificationDate=1290439180000	Government of Uganda needs an evidence based policy on pastoralism and to provide protection to the population and address ongoing human rights abuses by the UPDF, GOU and WFP should not conflate agricultural with self reliance and should recognise the risks associate with promoting crop production. Mobile livestock production should be promoted and restrictions on outmigration removed.
The Relevance of Resilience , 2012, Simon Levine ,ODI http://www.odi.org.uk/sites/odi.org.uk/files/odi-assets/publications-opinion-files/7818.pdf	
Resilience: New Utopia or New Tyranny? Reflection about the Potentials and Limits of the Concept of Resilience in Relation to Vulnerability Reduction Programmes, September 2012, Christophe Béné, Rachel Godfrey Wood, Andrew Newsham and Mark Davies, http://www.ids.ac.uk/publication/resilience-new-utopia-or-new-tyranny	Assesses the advantages and limits of resilience. While the review highlights some positive elements –in particular the ability of the term to foster integrated approach across sectors– it also shows that resilience has important limitations. In particular it is not a pro-poor concept, and the objective of poverty reduction cannot simply be substituted by resilience building.
EMERGENCY PREPAREDNESS AND RESPONSE	
ALNAP Humanitarian Action in Drought-Related Emergencies, October 2011 http://www.alnap.org/pool/files/alnap-lessons-drought.pdf	Excellent overview of good practice and lessons learnt from the Horn of Africa 2010/11 drought.
Livestock Emergency Guidelines and Standards (LEGS) http://www.livestock-emergency.net/userfiles/file/legs.pdf	Comprehensive and evidence based guidelines on livestock related emergency and recovery interventions
National Guidelines for Livestock Relief Interventions in pastoral areas of Ethiopia http://www.disasterriskreduction.net/fileadmin/user_upload/drought/docs/National%20Guidelines%20for%20Livestock%20-%20Ethiopia.pdf	Based on LEGs but more specific and practical in some areas e.g. criteria for restocking etc. (specific to Ethiopia but applicable for the region)

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The use of cash transfers in livestock emergencies and their incorporation into LEGS, 2011, Vetworks/FAO http://www.livestock-emergency.net/userfiles/The%20Use%20of%20Cash%20Transfers%20in%20Livestock%20Emergencies.pdf	
CONTINGENCY PLANNING	
System failure? Revisiting the problems of timely response to crises in the Horn of Africa, Simon Levine, 2011 http://www.odihpn.org/hpn-resources/network-papers/system-failure-revisiting-the-problems-of-timely-response-to-crisis-in-the-horn-of-africa	Highlights the need for contingency planning to be a process based on crisis calendars/preparedness auditing, the need to rethink DCM approaches as drought crisis no longer cyclical and the need to promote such approaches, the time to rethink the aid system to promote collaboration and communication for early action
RELPA guide to contingency planning, Simon Levine and Mohammed Abdinoor, 2011 http://www.disasterriskreduction.net/fileadmin/user_upload/drought/docs/RELPA%20Guide%20to%20ER%20Booklet%20082608.pdf	Outlines the approach to contingency planning referred to above.
NATURAL RESOURCE MANAGEMENT (NRM)	
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PARTICIPATORY NATURAL RESOURCE AND RANGELAND MANAGEMENT	
REGLAP technical brief on PNRM, 2011 http://www.disasterriskreduction.net/fileadmin/user_upload/drought/docs/1_Technical%20brief%20participatory%20NRM%20SCUK%20ET_FINAL%20AUG2011.pdf	
REGLAP technical brief on reciprocal resource agreements, 2011 http://www.disasterriskreduction.net/fileadmin/user_upload/drought/docs/Technical%20brief%20Reciprocal%20resource%20agreements_FINAL_4th%20No.pdf	
Participatory natural resource management guidelines (2009), Flintan and Cullis	
Mapping guidelines, Flintan (forthcoming)	

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Learning by Doing: Working Towards Participatory Rangeland Management (PRM) in Pastoral Areas through ELMT/ ELSE http://www.disasterriskreduction.net/fileadmin/user_upload/drought/docs/Learning_by_Doing_Flitan_May10.pdf	Comprehensive overview of the lessons learnt and good practice identified during the ELMT/ELSE program, particularly looking at PNRM.
Planning with uncertainty: Scenario planning, SoS Sahel http://pubs.iied.org/pdfs/12562IIED.pdf	Methodology for incorporating community visions and change in planning
An assessment of natural resource governance in Garbatulla, Northern Kenya, May 2011, IUCN http://cmsdata.iucn.org/downloads/garba_tula_governanceassessment_final_reportmay_2011.pdf	A 'good practice' overview of promoting environmental governance
Participatory Impact Assessment of enclosures (2010), Tufts University, http://www.celep.info/wp-content/uploads/2012/07/Tufts-impact-assessment-summary-Feb-20121.pdf	Enclosures can be valuable in rangeland management and DRR ONLY if established by the consensus of the community, are accessible to all traditional users, are limited in space and time, and are managed with the involvement of customary institutions. Need better monitoring of benefits to poor households and women. Otherwise it is likely to contribute to increased fragmentation and benefit wealthier groups alone.
Participatory Impact Assessment of enclosures (2010), Tufts University, http://www.celep.info/wp-content/uploads/2012/07/Tufts-impact-assessment-summary-Feb-20121.pdf	Enclosures can be valuable in rangeland management and DRR ONLY if established by the consensus of the community, are accessible to all traditional users, are limited in space and time, and are managed with the involvement of customary institutions. Need better monitoring of benefits to poor households and women. Otherwise it is likely to contribute to increased fragmentation and benefit wealthier groups alone.
Garba Tula booklets Booklet 1: Strengthening natural resource governance http://www.disasterriskreduction.net/fileadmin/user_upload/drought/docs/Handbook%201%20Strengthening%20natural%20resource%20governance%20in%20GarbaTula.p df	This handbook explains the overarching goal of the <i>"Improving Natural Resource Governance for Rural Poverty Reduction"</i> project, the approaches adopted and why governance, and in particular natural resource governance, is of interest in the drylands of Garba Tula. The booklet further explains the specific results of the project as well as the project strategies for achieving these results. The handbook finishes with key lessons and the next steps necessary for achieving good governance of natural resources in the district
Booklet 2: Participatory rangeland planning	This handbook is a product of IUCN's Garba Tula project "Improving Natural Resource

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http://www.disasterriskreduction.net/fileadmin/user_upload/drought/docs/Participatory%20rangeland%20planning.pdf	Governance for Rural Poverty Reduction”. It also borrows from other IUCN experiences in participatory environmental work in Eastern Africa. The handbook offers a quick and easy procedure to be used in realizing Participatory Rangeland Planning processes that will enable communities to derive multiple benefits from dryland natural resources in a sustainable manner through the engagement of various stakeholders.
Booklet 3: Enabling community benefits from sustainably managed drylands http://www.disasterriskreduction.net/fileadmin/user_upload/drought/docs/Enabling%20community%20benefits%20from%20sustainable%20drylands.pdf	This handbook provides an overview of the tools and approaches that can be used to fully understand the values and opportunities available from sustainably managed drylands. It describes a process of analysis undertaken in Garba Tula district of Northern Kenya to support communities in realising the full potential of the rangelands that they collectively and sustainably manage.
LAND	
“Broken land, broken lives?”: The causes, processes and impacts of land fragmentation in the rangelands of Kenya, Ethiopia and Uganda, 2011, Fiona Flintan/REGLAP – http://www.disasterriskreduction.net/fileadmin/user_upload/drought/docs/BLBL_1IntroductionSummary.pdf	
Summary brief: The causes, processes and impacts of land fragmentation in the rangelands of Kenya, Ethiopia and Uganda, 2011, Fiona Flintan/REGLAP http://www.disasterriskreduction.net/fileadmin/user_upload/drought/docs/Summary%20brief%20land%20fragmentation_FINAL_15th%20August%202011.pdf	
Rangeland fragmentation in traditional grazing areas and its impact on drought resilience of pastoral communities: Lessons from Borana, Oromia and Harshin, Somali Regional States, Ethiopia, Fiona Flintan Boku Tache and Abdurehman Eid http://www.disasterriskreduction.net/fileadmin/user_upload/drought/docs/1_Ethiopia%20Land%20Fragmentation%20Report_FINAL%207%20feb%202012.pdf	This Study highlights the change in land use in pastoral areas and it’s effect on resilience to drought and need to ensure the protection of communal grazing areas in DRR approaches in pastoral areas.
Summary brief: Why halting the fragmentation of rangelands will improve the drought resiliency of Ethiopia’s pastoralists, 2011, Fiona Flintan, http://www.disasterriskreduction.net/fileadmin/user_upload/drought/docs/1_Rangela	An edited extract from the above study

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Land tenure options: experiences shared and implications for Ethiopia, 2011, Flintan/REGLAP http://www.disasterriskreduction.net/east-central-africa/library/detail/en/?dyna_fef%5Buid%5D=1846	
RANGELAND HEALTH	
Overview of holistic management, 2009, Farley C. http://www.disasterriskreduction.net/east-central-africa/library/detail/en/c/1414/	
Monitoring Rangeland Health Guide for facilitators or pastoralist communities , 2010, Riginos et al http://www.disasterriskreduction.net/east-central-africa/library/detail/en/c/1997/	
SOIL AND WATER CONSERVATION	
Adult education package for drylands of East Africa: Environmental care and dryland agriculture: http://www.lianary.org/edumaterials/Environmental%20care%20session%20plan.pdf	
Water harvesting: http://www.lianary.org/edumaterials/Rainwater%20harvesting%20session%20plan.pdf	
Carbon finance potential in the Ethiopian rangelands, Tropical Forest Group: study and policy brief: SCUS/ELMT, Jan and April 2010	
WATER	
REGLAP good practice principles on water development in the drylands http://www.disasterriskreduction.net/fileadmin/user_upload/drought/docs/Good%20practice%20principles%20on%20water%20development_8%20Nov.doc.pdf	Brief summary of current understanding of what ensures approaches are successful, some strengthening through impact assessments necessary
Synthesis of Existing Knowledge and Experience on the Provision of Water Supplies to Pastoral Communities in Ethiopia, 2009, Micki Nassef et al http://www.disasterriskreduction.net/fileadmin/user_upload/drought/docs/Water_Eth	Comprehensive overview of water development in the drylands of Ethiopia, its success, failures and lessons learnt

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Access to water, pastoral resource management and pastoralists' livelihoods: Lesson learned from water development in selected areas of Eastern Africa , 2006 Nathalie Gomes, FAO http://www.fao.org/es/esw/lsp/cd/img/docs/LSPWP26.pdf	Succinct overview of water development and disasters in the 3 countries. Highlights in Kenya that concerns over water development were identified by ARLMP as early as 1997 and Oxfam studies 1996 and 2002 highlighted concerns over the environmental impact of new boreholes. Also finds that control of new boreholes exacerbated clashes between Somali clans in Wajir. Also provides information on changes in grazing patterns in Wajir.
LIVESTOCK HEALTH	
Study on CAHWs in Kenya , Tim Leyland, for FAO	
CAHW training manuals and guides , ITDG Training for Trainers	
Camel husbandry and health training manual , KARI, http://www.kari.org/kasal/docs/2012june_CASPRO_manual.pdf	
ELMT technical briefs on public-private partnerships in vet drug supplies http://www.disasterriskreduction.net/fileadmin/user_upload/drought/docs/Technical_Brief_Privatisation_of_vet_services_Apr10.pdf	
Technical Brief on PPR , 2008, Nyamweya M. Et al http://www.disasterriskreduction.net/east-central-africa/library/detail/en/c/1414/	
Technical Brief on Camel Sudden Death , 2010, Gluecks, I. And Younan M. http://www.disasterriskreduction.net/east-central-africa/library/detail/en/c/1279/	
LIVESTOCK MARKETING	
Livestock exports from the Horn of Africa: An analysis of the benefits by Pastoralist wealth group and policy implications , 2009, Aklilu and Catley, http://sites.tufts.edu/feinstein/2009/livestock-exports-from-the-horn-of-africa	Pastoral areas of the Horn are characterised as universally poor due reliance on income stats. Livestock holdings are a more useful measure of poverty than household income. Export strategies are biased towards the richer pastoralists. Need to support a strategy of herd growth for poorer households, secondary roads, mobile phone networks, financial services, primary vet services, DCM, showing costs of benefits of destocking versus food aid etc.
Mind the Gap: Commercialisation, Livelihoods and Wealth Disparity in Pastoral Areas of Ethiopia , December 2010 Aklilu and Catley,	General trend is 'moving up moving out' and should be supported. Lack of alternative options means that education is central to efforts

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Pastoral milk production and market chain analysis in Dolo Ado and Dolo Bay, Somali Region of Ethiopia , 2010, Lumadede et al. http://www.disasterriskreduction.net/east-central-africa/library/detail/en/c/1414/	
Market access and trade issues affecting the drylands in the Horn of Africa: Brief prepared by a Technical Consortium hosted by CGIAR in partnership with the FAO Investment Centre , Akililu, Y., Little, P.D., Mahmoud, H., and McPeak, J. 2013. http://cgspace.cgiar.org/handle/10568/27616	
<i>CROP AGRICULTURE IN DRYLANDS</i>	
Study: The place of crop agriculture in the drylands of the Horn of Africa: an opportunity or a threat? http://www.disasterriskreduction.net/fileadmin/user_upload/drought/docs/FINAL%20REPORT_The%20place%20of%20crop%20agriculture%20in%20the%20drylands%20of%20the%20HoA.pdf	
Summary brief: The place of crop agriculture for resilience promotion in the drylands: an opportunity or a threat? http://www.disasterriskreduction.net/fileadmin/user_upload/drought/docs/FINAL%20DRAFT_Summary%20Brief_the%20place%20of%20crop%20agriculture.pdf	
Enhancing resilience in the Horn of Africa: An exploration into alternative investment options, 2012 Derek Headey, Alemayehu Seyoum Taffesse, Liang You International Food Policy Research Institute (IFPRI), Washington DC, USA & Addis Ababa, Ethiopia http://www.ifpri.org/sites/default/files/publications/ifpridp01176.pdf	Most non-pastoralist livelihoods in ASALs yield lower incomes than pastoralism, with the exception of urban livelihoods and irrigated farming, which both have limited capacity to absorb growing populations. Additional irrigation investments in pastoralist regions, for example, appear to be capable of profitably absorbing only about 3 percent of the estimated pastoralist population by 2020 . Migration is more promising, but only provided that it comes on the back of much larger investments in education and meaningful urban job opportunities. A rapid expansion of education is probably the highest return on investment for positively diversifying the economy.
Replacing Pastoralism with irrigated Agriculture in the Awash Valley, Northern Eastern Ethiopia , Behnke and Kerven, 2011	Compares the economic returns derived from devoting the Awash valley to pastoralism versus irrigated cotton and sugar cultivation: concludes that

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http://www.cop-ppld.net/fileadmin/user_upload/cop-ppld/items/Replacing_pastoralism_with_irrigated_agriculture_Awash_Ethiopia_Roy_Behnke_and_Carol_Kerven.pdf	pastoralism is economically comparable or more advantageous (additional environmental and pro-poor, and social impacts)
What to do about Karamoja? Simon Levine, 2010 http://www.celep.info/wp-content/uploads/downloads/2011/07/what-to-do-about-Karamoja.pdf	Policies by Government and other actors forcing settlement and dependence on rain-fed agriculture are creating artificial disaster emergencies. Promoting mobility and livestock production are key. Rangeland management and conflict need to be appropriately addressed.
The Role of mobility within the risk management strategies for pastoralists and agro-pastoralists , Brent Swallow http://pubs.iied.org/pdfs/6061IIED.pdf	
Economic importance of goods and services derived from dryland ecosystems in the IGAD region , IUCN, April 2010 http://cmsdata.iucn.org/downloads/4615_fnl_report10_04212.pdf	Case studies of irrigated agriculture in Garbatulla and Tana River delta: diverting river water for agriculture away from livestock keeper can have adverse effects on their ability to cope during drought.
ELMT technical briefs on fodder production http://www.disasterriskreduction.net/fileadmin/user_upload/drought/docs/ELMT_TECHNICAL_BRIEF_fodder_production.pdf	
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Lake Turkana and the Lower Omo: hydrological impacts of major dam and irrigation developments, October 2012 Vol 1 http://www.africanstudies.ox.ac.uk/sites/sias/files/documents/Vol%20I.pdf	
Water master plan for northern Kenya, JICA	
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Guidelines for developing sustainable dryland products enterprises: commercial and development sector operators S. Wren (2010): http://www.disasterriskreduction.net/east-central-	

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Tourism, Vision 2030 and pro-pastoralist livelihoods in north-eastern Kenya http://www.disasterriskreduction.net/east-central-africa/library/detail/en/c/2003/	
Financial services and capacity building	
REGLAP good practice principles on savings groups in the drylands of the Horn of Africa, CARE Kenya, April 2013 http://www.disasterriskreduction.net/fileadmin/user_upload/drought/docs/Good%20practice%20principles%20on%20groups%20savings%20and%20loans_FINAL_April%202013.pdf	
VICOBA training manuals, CARE Unpublished?	
Financial literacy training manual, CARE Kenya, unpublished?	
Small Business Management Skills-Facilitators guide, 2010, Paul Gachie, A. Chege http://www.disasterriskreduction.net/east-central-africa/library/detail/en/c/1404/	
Adult Business Literacy Curriculum for North Eastern Province-Kenya, 2010, EEMS http://www.disasterriskreduction.net/east-central-africa/library/detail/en/c/1999/	
PRIVATE SECTOR	
Making Markets work for the Poor (M4P) in practice: http://www.m4phub.org/m4p-in-practice/	
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Guidelines for the Identification, Selection and Development of Alternative Enterprise Opportunities, 2008, Farouk, and Kiama http://www.disasterriskreduction.net/east-central-africa/library/detail/en/c/1997/	
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Mobile Pastoralists and Education: Strategic Options , October 2009, Kratli and Dyer http://pubs.iied.org/pdfs/10021IIED.pdf	Comprehensive overview of options for pastoral education done in conjunction with the Ministry of Northern Kenya
From Policy to Practice: Scaling up access to quality basic education for nomadic populations in Kenya , 2011, Catherine Fitzgibbon http://www.disasterriskreduction.net/fileadmin/user_upload/drought/docs/REGLAP%20magazine.pdf	
Towards Education for Nomads: Community Perspectives in Kenya , August 2010, Izzy Birch, Sue Cavanna, Dauod Abkula and Diyad Hujale http://pubs.iied.org/pdfs/10026IIED.pdf	
Bringing Books to Pastoral Communities: Camel libraries in the Somali region , 2011, Nicola Berry http://www.disasterriskreduction.net/fileadmin/user_upload/drought/docs/REGLAP%20NEWSLETTER%202011c.pdf	
The School of Life: Education in a Pastoralist Community 2009 http://www.disasterriskreduction.net/east-central-africa/library/detail/en/c/2415/	Overview of informal cultural education that takes place among the Borana community in Southern Ethiopia
GOVERNANCE	
Strengthening voices: How pastoralist communities and local government are shaping strategies for adaptive environmental management and poverty reduction in Tanzania's	Overview of using IIED/MSTDC training on pastoral policy has enabled pastoralist and local government to plan together

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Duncan Green, From Poverty to Power 2012 http://www.oxfam.org/en/video/2012/duncan-green-introduces-poverty-power-new-edition	
HUMAN HEALTH	
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NUTRITION	
Milk matters: The role and value of milk in the diets of Somali pastoralist children in Liben and Shinile, Ethiopia. September 2009, Kate Sadler and Andy Catley (https://wikis.uit.tufts.edu/confluence/download/attachments/30933049/milkmatters2.pdf?version=1)	Milk is prioritized for consumption by young children and that seasonal lack of access to animal and animal products is widely perceived by pastoralists as a primary factor behind child malnutrition. While the international response to malnutrition has typically been reactionary, the study examined the potential cost savings both short and long term, economic and social, of a more preventive approach.
GENDER	
Changing gender roles in the HOA and the implications for DRR programming , 2011, Fiona Flintan http://www.disasterriskreduction.net/fileadmin/user_upload/drought/docs/Gender%20and%20DRR_FINAL_Dec%202011.pdf	Review of grey literature on the changing nature of gender roles in the drylands of the Horn of Africa, following the 2011 drought.
Summary brief: changing gender roles in the HOA drylands and the implications for programming , 2011 http://www.disasterriskreduction.net/fileadmin/user_upload/drought/docs/Gender%20and%20DRR%20Summary%20brief_25%20Jan%202012.pdf	
Women's Empowerment in Pastoral Societies , September 2008, Fiona Flintan IUCN http://cmsdata.iucn.org/downloads/gender_format.pdf	Provides examples of good practice in supporting pastoral women's empowerment
Gender and Pastoralism Vol 1: Rangeland Resource Management in Ethiopia , September 2007, Fiona Flintan, Getachew Mamo and Andrew Ridgewell (Eds),	A book that emphasises on pastoral gender relations and the different ways women and men access, use and manage natural resources, and what impacts

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http://www.sahel.org.uk/pdf/Gender%20&%20Pastoralism%20Vol%201%20-%20ebook.pdf	changes in the resource patterns have on these relations.
Gender and Pastoralism Vol 2: Livelihoods and income Development in Ethiopia , September 2007, Fiona Flintan and Andrew Ridgewell (eds) http://www.sahel.org.uk/pdf/Gender%20&%20Pastoralism%20Vol%202%20-%20ebook.pdf	A six- chapter book that analyses how pastoral women are taking up new business opportunities; and if given the right support such as accessing markets, can develop highly successful businesses and trading activities
ASSESSMENT METHODOLOGIES	
Practitioners guide to HEA. Chapter 6: Adaptations of HEA http://www.feg-consulting.com/resource/practitioners-guide-to-hea/6%20Adaptations%20of%20HEA.pdf	Useful recommendations on adapting HEA methodology for pastoral households especially around herd dynamics and seasonality
M & E	
“Towards the Measurement of Household Resilience to Food Insecurity: Applying a Model to Palestinian Household Data.” Alinovi, L, E Mane, and D Romano. 2008. In <i>Deriving Food Security Information from National Household Budget Surveys</i> , 186. Rome: Food and Agriculture Organization of the United Nations (FAO), http://www.fao.org/docrep/013/al920e/al920e00.pdf	
Community Based Resilience Analysis (CoBRA): Conceptual Framework and Methodology , http://www.disasterriskreduction.net/fileadmin/user_upload/drought/docs/CoBRA%20Conceptual%20Framework%20and%20Methodology%20-%2016%20May%202013.pdf	
Evidence of change approach to monitoring in ELMT , Vanessa Tilstone (2008) http://www.disasterriskreduction.net/east-central-africa/library/detail/en/c/1841/	
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Integrated monitoring : A practical guide for organisations that want to achieve results, 2012, Herrero Sonia http://www.hapinternational.org/pool/files/demystifying-the-monitoring-process.pdf	
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How to document good practice/lessons learnt , Vanessa Tilstone, 2011: http://www.disasterriskreduction.net/east-central-africa/library/?querystring=guidesmanuals	
ELMT guide to documenting stories of change http://edu.care.org/Documents/ELMT%20Guide%20to%20documenting%20stories%20of%20change.pdf	
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