



## Time for change

The impact of recent livestock emergency interventions on the future of sustainable service delivery in Northern Kenya

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## Table of Contents

Acknowledgements .....	2
Introduction & Summary.....	3
Study Area .....	5
Methodology.....	8
A Difficult Environment .....	9
Underperforming livestock markets.....	9
Low investment in infrastructure .....	10
Lack of permanent veterinary facilities .....	10
Poor access to veterinary services.....	11
Unregulated cross-border trade .....	11
The market for livestock services.....	12
Market structure.....	12
Inputs market .....	14
Human resources.....	16
Donor activities .....	19
Scope of interventions.....	19
Scale of activities .....	20
Motivation for emergency response .....	21
Impact of donor programmes .....	22
Technical impacts .....	22
Inappropriate interventions .....	22
Market impacts.....	24
Conclusion and recommendations.....	30
Technical recommendations.....	30
Delivery recommendations.....	30
Annexes .....	34
Annex 1: Existing production and potential demand for livestock vaccines in Kenya .....	34
Annex 2: Common livestock diseases in study area .....	34
Annex 3: Project delivery schedule.....	35
Annex 4: Veterinary human resources recorded in Northern Kenya .....	35
Annex 5: NGOs active in study area.....	37
Annex 6: Price of genuine vs counterfeit treatments in the market .....	38
Annex 7: Inputs commonly available through private channels.....	38
Annex 8: Qualified vets from Northern Kenya.....	39
Annex 9: Emergency funding to Kenya through CERF 2010-12 .....	40
Annex 10: Office-based interviews (redacted) .....	40
Annex 11: Field interviews (redacted) .....	40

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Photographs are courtesy of field researchers Dr Hussein Mahmoud and Dr Mohamed Yussuf including the cover photo 'Garissa Livestock Market'.

## Introduction & Summary

There is a significant pastoral economy across Northern Kenya which has the potential to contribute more to Kenya's economic growth and food requirements. This study critically examines the current mechanisms of delivery for livestock health services in Northern Kenya. Specifically it highlights the scope and impact of subsidized inputs, which, the report argues, are preventing the emergence of more sustainable service delivery systems.

Northern Kenya is classified as an Arid and Semi-Arid Land (ASAL) zone in which livestock production is the major economic activity. **Kenya's ASAL areas support roughly 70-80% of national livestock production<sup>1</sup> and the livelihoods of 8 million people, contributing US\$3bn a year to the national economy<sup>2</sup>.** Strengthening livestock services is a priority development area identified by government in its Vision 2030 plan for Northern Kenya<sup>3</sup>. Despite the high economic value of livestock production, ASAL areas have received a disproportionately low share of government livestock health resources<sup>4</sup>.

The region has become increasingly reliant on donor support to provide basic livestock health services. **Donor funding is typically provided during emergencies such as droughts or disease outbreaks, with little or no funding available outside times of declared emergency.** At best, such interventions provide short-term, often inadequate relief to long term needs. At worst, **the ongoing delivery of donor-funded services creates market distortions that make the emergence of sustainable alternatives to service delivery virtually impossible.** The wider problem of dependency linked to emergency based funding for ASAL areas in the horn of Africa has attracted significant attention in recent years and this focus presents an opportunity to shift towards more long term approaches.

Donor-funded livestock programs generally procure inputs centrally and deliver these through a network of NGOs in partnership with government. **The donor system creates a network of international NGOs competing to deliver services locally, requiring repeated donor funding in order to "stay in business" and with little incentive to create more sustainable outcomes. Services are often free at the point of delivery, driving prices downward and undermining quality and reliability of market-based alternatives where they exist. Such interventions contravene best practice guidelines and leave little or no sustainable services in place after emergency funding has gone<sup>5</sup>.**

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<sup>1</sup> Government of Kenya figures

<sup>2</sup> Recent IGAD sponsored data suggests a value of US\$3.8bn per annum. An assessment of the Total Economic Value (TEV) of Kenyan Pastoralism suggests direct and indirect values of up to US\$6bn per annum.

<sup>3</sup> In its Vision 2030 Development Strategy for Northern Kenya (2011) the Government of Kenya identifies the need to strengthen livestock disease control and surveillance systems, provide support to veterinary service provision and engage the private sector in providing animal health services.

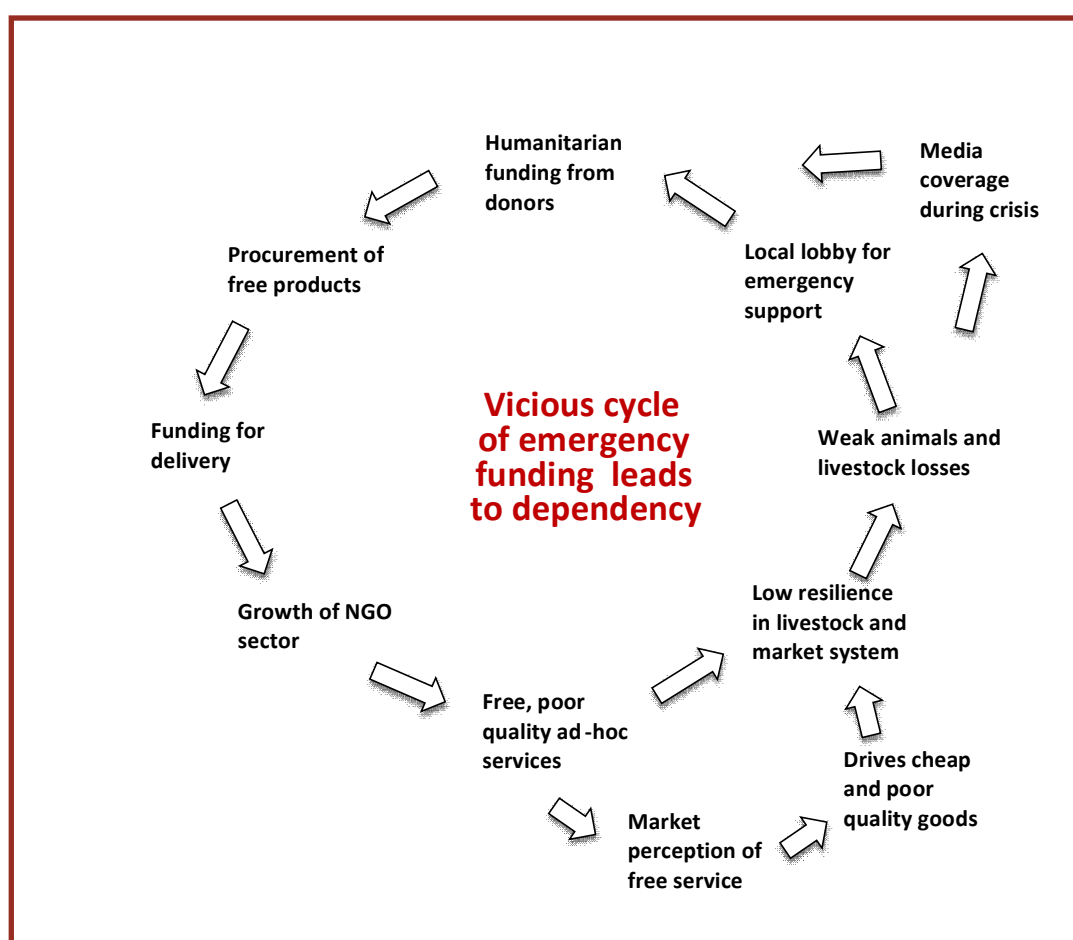
<sup>4</sup> According to GOK figures, Northern Kenya hosts 70% of livestock numbers but is served by less than 10% of government livestock officers.

<sup>5</sup> Best practice published in the Livestock Emergency Guidelines (LEGS) emphasises a long term and preventative approach, investing in existing local service providers to ensure that sustainable local services are supported, not undermined.

## Key lessons from livestock emergency interventions

Intervention	Impact
Frequently technically inappropriate interventions e.g. <ul style="list-style-type: none"> <li>Vaccinating weak malnourished livestock</li> <li>De-worming during droughts</li> </ul>	Ineffective service, livestock death and loss of confidence in vaccination and other veterinary services by pastoralists. Mass delivery results in leakage of products into the market, undermining private service providers.
Centralised procurement and NGO/government distribution causing damage to market	Diversion of free products causes market price collapse and promotes cheap, low quality competition. Free products compete with private sector, putting them out of business
Services delivered by short term NGO project teams	Local professionals incentivised by lucrative short term <i>ad hoc</i> projects rather than long term service delivery

Donor funded activities are reliant on the continued release of emergency funds which makes them fundamentally unsustainable as illustrated in the following cycle diagram.



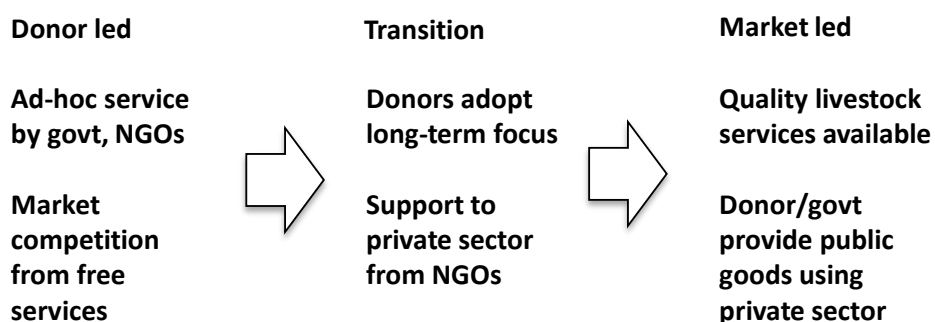
This report presents a new vision in which livestock services are supported by a vibrant, dynamic, well-regulated, private sector while the state (with support from donors) focuses resources on delivering support infrastructure and priority public goods<sup>6</sup>, with NGOs are engaged in market support. The diagram on the following page summarizes this approach. An alternative future would be to see livestock services delivered by a well-funded government service. This is an improbable

<sup>6</sup> Peacock (2010) Making livestock services accessible to the poor: Moving towards a new vision for livestock service delivery.

scenario in the Kenyan context. The government lacks the resources necessary to deliver sustained quality services and would be immediately reliant upon donor funding to do so, and the availing of donor funds for direct support to government services is extremely unlikely.

Both resilience and development approaches advocate building the capacity of markets to supply critical services, including livestock health. Changing the system will be hard and key to beginning the process will likely be to agree some first pragmatic and achievable steps towards breaking the paradigm, agreeing new clear roles for government, NGOs and private sector stakeholders in order to start unlocking market potential. If pastoralists can regularly access consistent animal health inputs and services *through the market*, they could grow the productivity of livestock during normal conditions while increasing their resilience to external shocks while contributing to economic growth and poverty reduction.

***Transition to market-led delivery of livestock health services***



**Key recommendations include:-**

**DO NOT**

Vaccinate or de-worm livestock during droughts.

**DO**

Minimize free distribution of products.

Support the move towards a routine program of regular vaccination.

Procure products used in emergency programs locally, wherever possible.

Use local private sector to deliver services wherever they exist.

Use voucher systems wherever possible to help 'prime' the market and support the local private sector.

Pilot properly monitored public-private partnerships to deliver more sustainable services and support the emerging private sector.

Support emergency feeding/watering and marketing programs during droughts.

## Study Area

The study targets four ASAL counties in Northern Kenya: Garissa, Mandera, Wajir and Marsabit with interviews also conducted in Isiolo and Nairobi. The study area makes up a large portion of Kenya's ASAL land area characterized by flat bush and grassland with low population density averaging 5/km<sup>2</sup>. Market centers are located tens or even hundreds of kilometers apart, and the road network is largely un-surfaced with large parts of the region inaccessible during the wet season.

Map of study area showing counties and major towns



Livestock production is the leading economic activity in the study area, which hosts over ten million head of mixed livestock including cattle, sheep, goats and camels. The economic status of the population is inexorably intertwined with the health and productivity of livestock. Animals are a source of wealth and pride, food and raw materials (hides, horn), as well as numerous traditions and cultural practices. Estimates of the annual direct value of livestock to the average family in Northern Kenya range between US\$60 and US\$500 although the true value of livestock derived from direct resources, trade and market engagement is much higher.<sup>7</sup> A study from Turkana district in 2013

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<sup>7</sup> An assessment of the Total Economic Value (TEV) of Kenyan Pastoralism

estimated that livestock provided 80% of food and resource income and 40% of cash income<sup>8</sup> to families.

**Population and livestock data in study area (2009 estimates)**

County	Land area km <sup>2</sup>	Human population	Livestock population			
			Cattle	Sheep	Goats	Camels
Garissa	33,620	623,060	266,878	312,601	1,000,856	101,548
Mandera	26,474	1,025,750	1,076,978	1,632,824	3,929,747	930,819
Wajir	56,501	661,941	794,552	1,405,883	1,866,226	533,651
Marsabit	66,923	291,166	137,256	89,154	174,685	87,229
<b>TOTAL</b>	<b>183,518</b>	<b>2,601,917</b>	<b>2,275,664</b>	<b>3,440,462</b>	<b>6,971,514</b>	<b>1,653,247</b>

*Source: Kenyafoodsecurity.org, GOK Census Data*

Herd loss caused by livestock disease can be catastrophic and impoverish families. The impact of livestock disease in Northern Kenya is significant, with a number of major diseases endemic to the region<sup>9</sup>. There are no complete estimates of the total economic loss to the region from livestock disease but the economic impact is severe: a 2009 outbreak of Rift Valley Fever (RVF) affecting pastoral areas had an estimated direct cost to the economy of over \$32 million<sup>10</sup>.



**1 Herders on road near Moyale**

<sup>8</sup> Turkana County: Long rains 2013 food security assessment report.

<sup>9</sup> See Annex 2 for details of common livestock diseases in the region.

<sup>10</sup> ILRI: Assessing the full costs of livestock disease



## Methodology

The research was commissioned by REGAL-IR and conducted between October 2013 and January 2014, coordinated by Wellspring Development with key field research undertaken by Dr Hussein Mahmoud and Dr Mohamed Yussuf and further valuable input from a wider project team comprising Sidai, Kenya Markets Trust (KMT) and GALVmed staff. The findings are based on research derived from primary and secondary sources and collected from desk research and semi-structured interviews with experts in the field of livestock health, private, public and development sectors.

### Desk research

Desk research focused on identifying existing work relevant to this study focusing on prevailing trends in livestock service provision in Northern Kenya. The research examined donor funding of livestock services, the structure and type of activities in livestock health service delivery, actors involved and the use of existing market-based approaches in Kenya and elsewhere. Desk research was organized into a project database for use during this study and future reference.

### Key informant interviews

17 key informant interviews<sup>11</sup> were conducted with key stakeholders engaged in the delivery of animal health services to the region including donor and NGO staff, veterinary suppliers, inputs distributors, government staff and veterinary professionals. Interviews focused on collecting experience and opinions relating to the quality of livestock health service in the study area, and approaches to improving service delivery. Interviews were conducted mostly in Nairobi, either face-to-face or by telephone.

### Field research

Field research<sup>12</sup> was conducted by two experts in the livestock and animal health sectors who are local to the study areas, with strong personal and professional networks. Field research was conducted between November 2013 and January 2014 and covered all four counties of Mandera, Marsabit, Wajir and Garissa including major towns, smaller markets and rural locations (such as watering points).

Interviews were conducted with respondents in key categories including livestock health officials, NGO field staff, private agrovets, livestock traders and keepers.

**Categories of respondents in field interviews**

Category	# respondents
Livestock health officials	4
NGO field staff	7
Private agrovets/retailers	8
Livestock traders	6
Livestock herders/keepers	8

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<sup>11</sup> See Annex 10: Office-based interviews (redacted)

<sup>12</sup> See Annex 11: Field Interviews (redacted)

## Analysis

Interviews were transcribed electronically and collected in a central database for analysis. All interview transcripts were subjected to qualitative analysis by the research team, assessing responses alongside major questions in order to identify key themes.

## Sensitive Information

Many respondents gave their views in confidence to the field researchers and consultants. Much of the information is highly sensitive in nature and people were very reluctant and often scared to share information because of possible repercussions to their jobs, personal security, funding or businesses. This sends a message in itself, especially regarding the existence of a parallel market economy linked to humanitarian emergency funding streams and procurement processes.

## A Difficult Environment

### Underperforming livestock markets

**Livestock value chains in Northern Kenya are not fully established and markets are underperforming, which limits the cash available for pastoralists to invest in future livestock health.** Despite the high value of livestock production, 18 of the poorest 20 counties in Kenya are located in the North, and Northern Kenya was the only region to record an increase in poverty rates during the period 2005-2009. While pastoralists derive utility from their livestock in the form of products such as milk, meat and hides, few realize the cash value of their herds through sale in markets. This leads to a scenario with two related consequences limiting the uptake of livestock health services; 1) pastoralists have little cash to invest in animal health and 2) there is little economic incentive to improve herd health.

In relation to the animal health market, underperformance is also affected by the dominant behavior of investments in curative animal health over preventative. Pastoralists will easily spend money once an animal gets sick or looks unhealthy but are skeptical to spend when they are healthy. In short, pastoralists will sell animals to spend on goods and services they value (but their purchases may not “make sense” to an outsider who has different values).

The emergence of more commercial forms of pastoralism<sup>13</sup> in some areas is stimulating market engagement. There is evidence that where livestock is sold for profit, a share of the proceeds are likely to be re-invested in herd health, increasing demand for private livestock health services from wealthier owners<sup>14</sup>.

Market activity is also stimulated by increased access to communication and financial services, facilitating trade and the flow of money. This is brought about in part by mobile phone ownership, which is now common amongst pastoralists with service available in most towns and trading centers.

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<sup>13</sup> Increasingly pastoral herds are owned by livestock investors and traders who rear livestock for sale rather than long term ownership. Commercial pastoralism is particularly prevalent in Eastern areas and is linked to high levels of cross border trade.

<sup>14</sup> A 2007 study in Ethiopia estimated that pastoralists used 6% of income from sale of livestock during de-stocking programs on veterinary services. (Pastoralist Livelihoods Initiative, 2007).

## Low investment in infrastructure

**The poor state of infrastructure increases costs of delivery for livestock health services to the region.** Northern Kenya has historically faced political and economic marginalization, receiving a disproportionately low share of national economic resources. Poor road infrastructure, weak governance, conflict and underdeveloped health, education and energy networks increase the cost and risk of doing business.

For example, the cost of transporting livestock drugs from Nairobi to Northern Kenya is extremely high, making those products expensive in the local market (especially when compared to subsidized or cheaper counterfeit / low-quality drugs) and limits uptake by pastoralists. Delivering services across widely dispersed herds with poor infrastructure is logistically challenging and expensive for potential providers of livestock health services and erodes potential profits, discouraging investment. Innovative distribution models that aggregate demand and products that are easier to transport are required and not yet developed by a private sector that sees limited opportunity in northern Kenya.

*Kenya has been defined by the railway line. The rest of the country was neglected; the NFD was just empty space on the map.*

*Rt. Hon. Raila Odinga,  
5 December 2009*

Economic policy to support the dry lands - long discussed but lacking momentum – emphasizes the need for investment in infrastructure.<sup>15</sup>

Road construction in the Northern corridor is reducing the cost of transporting goods into certain areas but large parts of the region remain disconnected and unable to access both Kenyan and neighboring markets.

## Lack of permanent veterinary facilities

**Veterinary infrastructure is underdeveloped in the region making delivery of certain animal health inputs difficult.**

There is a lack of cold chain infrastructure outside major towns – due to high cost of cold-chain equipment and lack of reliable or existing electricity, which means (expensive) solar is the next best option in off-grid areas. The result is that networks for storage and delivery are largely restricted to government facilities and a handful of larger agrovets/retailers. The penetration of inputs such as vaccines which require special care is therefore limited to the reach of these networks. Currently it is easier for suppliers to distribute, and for pastoralists to access and carry those inputs which do not require special care such as treatments and dewormers. R&D investment into new thermostable or thermotolerant vaccines (such as for PPR), if successful, will make delivery and storage easier. It is practical innovations in this space that are most likely to have a transformative impact on livestock health in the medium term.

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<sup>15</sup> <http://www.future-agricultures.org/research/pastoralism/7871-opening-policy-space-for-pastoralism-in-kenya#.UvyzQPmSx6N>

## Poor access to veterinary services

**Limited access to veterinary services means that many livestock owners are unaware of the benefits.** Low uptake of veterinary services is due partly to the pastoralist production system which requires dispersed herds for risk managements: animals are remotely located and move great distances, making it difficult to access services which are typically offered in a fixed location. Cross-border livestock movements make delivery of livestock services even more challenging under current distribution models.

*"My best medicine is the knife – there are no animal health services we receive. God treats our animals.*

*Herder and Camel Keeper*

As a consequence many pastoralists have limited experience of livestock health services, are accustomed to self-administering certain treatments or simply accept livestock loss from disease as a way of life and part of the production cycle in arid environments.

Demand is also influenced by traditional approaches to livestock care, which overwhelmingly value treatment over prevention. Many livestock owners treat known conditions as they arise but have little experience of the benefits of vaccines, particularly since vaccines are often administered during emergency funded drought relief efforts when animals are weak. Vaccinating weak animals is ineffective as the animals' immune response cannot react properly, and vaccinating at the wrong time may not confer the preventative benefits of vaccines which sends the wrong message and may even result in increased mortality.<sup>16</sup>



2 Camel Keeper respondent at watering point near Bangal

## Unregulated cross-border trade

**Unregulated cross-border trade drives an influx of uncontrolled products, into the Kenyan market, which can undermine quality services.** Northern Kenya share extensive land borders with Ethiopia and Somalia, which are largely open to livestock movement and general trade<sup>17</sup>. Proximity to borders means that herders can trade their animals freely but also access livestock products and services supplied across the border. These products are often cheap, low quality or counterfeit

<sup>16</sup> This issue is discussed in more detail later under the 'Technical Impacts' section

<sup>17</sup> By one estimate 22% of cattle slaughtered in Kenya are imported from across the border (Fitzgibbon, 2012: Economics of Resilience Study – Kenya Country Report).

alternatives to genuine products available in the market. Even drugs of standard quality are often cheaper because of lower transportation costs and no duties when carried across the border. The increase in low cost, poor quality inputs contributes to undermining the business case for offering quality services and regulated goods. Pastoralists are largely unable to differentiate between quality and counterfeit products and there is weak enforcement at present. It also forces retailers to compete on price creating downward pressure on quality. Many respondents quoted poor and counterfeit drugs as one of the largest problems in the market<sup>18</sup>.

## **The market for livestock services**

### **Market structure**

The delivery of inputs and livestock health services occurs through both public and private supply chains. The principle of free service provision is well established in Northern Kenya and the public chain paired with low levels of regulation creates distortions that prevent the emergence of more sustainable and integrated alternatives.

The private sector market chain is not well developed. Typically private sector inputs are bought by traders from licensed suppliers (or the informal market) and sold to livestock owners via a network of local retailers and field agents. Agrovets coverage is limited to market towns, and livestock owners purchase either from these locations or from local agents who supply to rural areas, rarely offering basic clinical services alongside. Given the informal nature of this network it is not always easy for livestock owners to access support of diagnostic services. Pastoralists often simply purchase a stock of drugs to carry with them while herding, and administer them based on self-diagnosis. The existing distribution network with its limited geographic coverage and variable quality therefore only partially serves the needs of livestock owners.

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<sup>18</sup> See Annex 10: Office-based interviews (redacted) and Annex 11 Field Interviews (redacted)

### One market-based approach – Sidai agrovet services

Sidai Africa Ltd supplies veterinary products and livestock services through a network of branded franchises across Kenya including the North.

It offers vaccinations, disease surveillance and reporting, field diagnostics, treatment and clinical services. Each franchise is owned or managed by a qualified veterinarian or livestock technician, wherever possible, and delivers services directly or through a network of field agents.

Sidai has 70 branded outlets in Kenya, including 8 in Garissa, Isiolo and Marsabit. The future success of this approach requires livestock owners to accept the cost of high quality services from a trusted brand within an enabling market environment.

Market distortions are a hindrance to success: according to one Sidai franchisee, “we have to convince people that our services are worth paying for on a regular basis – even though they are used to free services”.



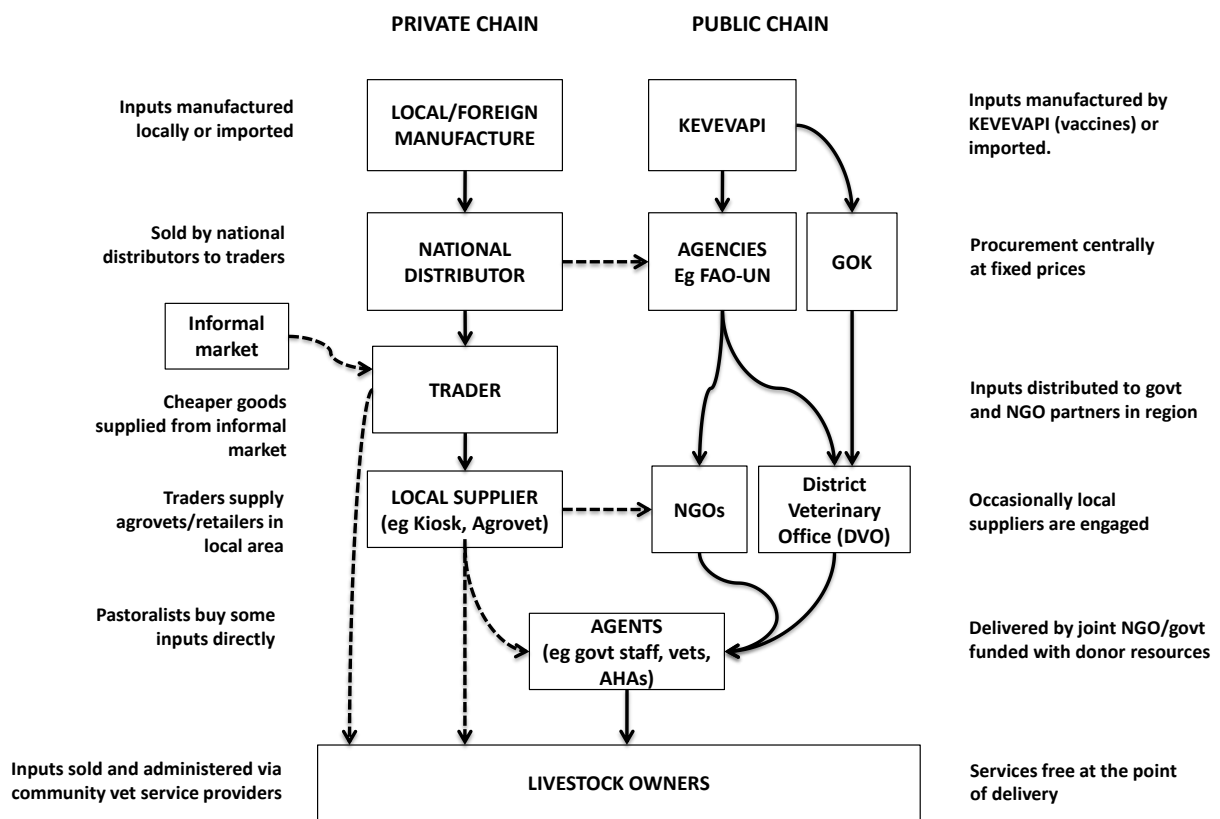
In the public sector chain, inputs are procured using donor or government funding. Vaccines are generally manufactured by KEVEVAPI<sup>19</sup>, or supplied from manufacturers overseas. Public procurement of inputs is conducted centrally and the local private sector is rarely engaged at the procurement stage, although certain NGOs have sought to use local traders to supply inputs for their programs<sup>20</sup>. Inputs are distributed to the field by local government and NGOs, using local government officials and temporary staff to conduct delivery. Typically inputs through the public chain are delivered free of charge<sup>21</sup>.

<sup>19</sup> KEVEVAPI, the Kenya Veterinary Vaccines Production Institute, is a parastatal vaccine manufacturer based in Nairobi.

<sup>20</sup> According to best practice, emergency-driven livestock interventions should support local service providers to ensure that existing services are not undermined (LEGS published guidelines).

<sup>21</sup> In some cases a small charge is levied on the livestock owner. These funds are typically remitted towards the cost of logistics and vaccine delivery and do not approach the market value of the product. There are also reports of illegal fees being levied.

## Private and public distribution chain for AH inputs



## Inputs market

This study focuses on two categories of animal health inputs: treatments and vaccines. These are the most commonly delivered inputs under livestock health interventions conducted in the study area.

### Animal health input categories

Product category	Examples
Treatments	Trypanocides Antibiotics Anthelmintics (dewormers) Acaricides
Vaccines	CBPP, PPR, CCPP, RVF, LSD, SGP

The most commonly available products in the private market are treatments: antibiotics, trypanocides and anthelmintics, which are widely available through agrovet retailers in major towns. The distribution of vaccines through the private sector is largely undeveloped, with the majority of vaccines delivered via the public chain. The lack of private alternatives is largely a product of the distortions created by free vaccine programs, which have been the modus operandi for disease control in the market for several decades and pastoralist perceptions. Vaccines have traditionally

been treated as public goods and provided by government, a practice which limits the willingness of pastoralists to pay for vaccinations and therefore willingness of agrovets to invest in supplying them. In addition vaccines often require specialist treatment and handling (such as cold chain infrastructure) which is a major investment for an undeveloped private sector. Although most vaccines are technically and legally private goods and are sold via the private sector in other parts of the country, in some areas of Northern Kenya district livestock officials do not allow their private sale, and misinform local suppliers that to do so would contravene the law.<sup>22</sup> This causes problems when the DVO offices have no funding for vaccinations other than when NGOs provide it, and NGOs are only receiving funding for these activities when there are 'emergency' situations and funding available to them.<sup>23</sup>

The volume of inputs supplied through the public distribution chain is not comprehensively recorded, and fluctuates depending on the availability of budgeted public funds and humanitarian response. Data reviewed in this study suggests that the number of animals receiving treatments and vaccines increases significantly during emergencies, with several million animals receiving treatment during drought years.

In the private chain, many inputs are low quality or counterfeit goods supplied through the informal market. With the market share of counterfeit products believed by some agrovets in this study to be as high as 80%, a large share of the market is unrecorded, making the size of the private market difficult to estimate.

The potential demand for vaccines is extremely high if all animals were vaccinated on a regular basis. There are an estimated 14 million animals in the study area including over 2 million cattle and 7 million goats. Nationally, GALVmed<sup>24</sup> estimates potential demand for three common vaccines (CCPP, CBPP and PPR) at 25 million doses per year<sup>25</sup>.

Local suppliers and traders interviewed for this study gave several explanations for the absence of vaccines in the market:

- Lack of demand from livestock owners due to low awareness of benefit.
- Competition from free vaccines issued by government programs.
- Vaccines are difficult to acquire.<sup>26</sup>
- Vaccines are difficult to handle, require special equipment and expire quickly.
- Policy on vaccine handling is ambiguous and agrovets are unsure where they stand.

Other factors affect the size of the private market for treatments and vaccines. Lack of cash limits demand, especially among smaller pastoralists. Low access to inputs due to remoteness and lack of retail infrastructure is also a major issue. Potential demand has been shown to exist where inputs are available: for example research in Samburu county showed that veterinary drugs worth over

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<sup>22</sup> For example, see interview number 4 with a senior manager of an input distribution company in Annex 10: Office-based interviews (redacted).

<sup>23</sup> We discuss the significant technical and developmental shortfalls of this systemic roadblock in later sections

<sup>24</sup> [www.galvmed.org](http://www.galvmed.org)

<sup>25</sup> See Annex 1 for more complete data from GALVmed on vaccine uptake.

<sup>26</sup> Previous work by GALVmed shows that Government policy on the production of CBPP, CCPP and PPR focuses vaccine delivery towards the public government / NGO supply chain and it is difficult for private suppliers to access supplies.



\$750 per month were sold from local agrovet suppliers in one location<sup>27</sup>; many other researchers and experts interviewed during this study are confident that livestock keepers will pay for vaccines if they are available, supported by Government and they understand the benefits.

### Factors affecting demand for inputs

Factor	Vaccines	Treatments
Awareness of benefits	Generally low	Some awareness of certain treatments esp. antibiotics
Availability	Limited to government officers in most areas	Selected inputs available in markets/towns, and agents that buy from them
Income levels	Cash incomes are generally low, reduced during drought and because of poor market infrastructure and security problems in some areas	
Cheap/counterfeit inputs	Sometimes available	Widely available
“Free” alternatives	Government vaccine programs	Common in emergency programs, especially dewormers

### Human resources

The availability of qualified human resources to deliver livestock health services in Northern Kenya is extremely limited and the potential value of the area’s livestock is undermined by this shortage of trained veterinary personnel. Government resources are inadequate: ASAL areas have 75% of the nation’s livestock but only 10% of veterinary officers<sup>28</sup>. Veterinary services are currently provided by a collection of government officials, NGO field staff, pastoralists themselves and a small number of private practices.



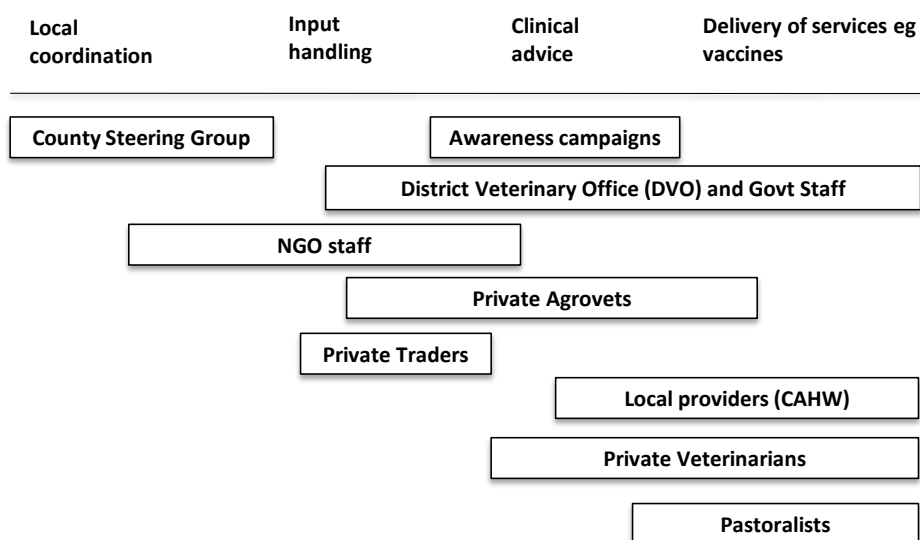
4 Female trader and respondent in Marsabit

<sup>27</sup> Delivery affordable and quality animal health services to Kenya’s rural poor

<sup>28</sup> Vision 2030 Development Strategy, GOK.

The various roles and responsibilities in the current system are outlined below:

### Human resource distribution and roles



There is widespread agreement that the level of veterinary human resources deployed to service pastoralists is extremely poor and in some cases non-existent. The Government remains engaged in vaccine and treatment campaigns but is reliant on donor and NGO support. Outside of these campaigns it has exited from regular service provision. There are estimated to be fewer than 50 government professionals working in the study area, responsible for several million head of livestock. Most are located in the major towns, with limited resources allocated for work at sub-county or ward level. There are a handful of professional vets from the North, many of whom work for NGOs, and some vets from other parts of the country who are servicing Northern Kenya (see Annex 8 for details on qualified vets from the North). Overall very few veterinary professionals are engaged in private practice: most rely on NGOs for employment. The private sector is being looked upon as a potential source of regular sustainable services, but is unable to attract the resources necessary to begin delivering these services due to a shortage of available personnel and competition for employment from NGOs.

**The Government provides very limited services outside of vaccination and disease control programs.** Interviews with DVO staff and reports from the regional offices<sup>29</sup> reveal a very limited scope of activities, with vaccine/treatment programs the most commonly listed, and generally conducted in partnership with local NGOs, funded by donors. The scope of clinical services is extremely limited, with services only offered during campaigns, sometimes on a “walk-in” basis at livestock offices (this is impractical for most pastoralists) or through media such as radio or brochures. The officers contacted all mentioned lack of general resources, staff shortages and limited transport as impediments to their work.

<sup>29</sup> Annual reports from Garissa County DVO are contained in the Annex.

**The majority of skilled livestock health human resources are found within the NGO sector and government, or outside of the profession.** Private service providers (such as AHAs) are engaged on an ad-hoc basis to support donor programs. The shortage of veterinary resources makes it difficult for existing business to expand their teams with qualified staff. Wage inflation due to high NGO salaries makes the private sector unable to compete. NGOs seek to maintain their capacity to attract donor funds for animal health activities, and salaries are typically much higher than equivalent private or government roles<sup>30</sup>. Many in the industry have commented off the record that NGOs in this area have become a major industry in their own right, and this causes a principal-agent dilemma where they are competing for resources in order to sustain their own jobs and operations; and in many cases this is distorting a more sustainable market system they should be working to build.

According to all livestock officers and many other respondents contacted during this study, NGO support is critical for the operations and local departments would not adequately function without this support.

**Agrovets play an important role providing basic and regular clinical services but are limited in number and in coverage.** Many agrovets are managed by individuals with prior veterinary expertise, such as AHAs and AHTs<sup>31</sup>. Of the livestock owners interviewed, the majority said that they sourced their regular clinical advice from agrovets. Access to private services is however limited outside towns. Legal restrictions on certain services (such as vaccines and clinical services which must be delivered under supervision of a qualified veterinarian) compound the problem of finding human resources to achieve proper coverage. Community-based service providers or trained private ‘agents’ would offer a cost effective means to reach remote areas, and are a necessary step in the human resource chain if private practitioners are to be able to cover these vast areas affordably. Coverage could also be improved by new distribution models.

*The quality of services provided to pastoralists is poor or non-existent. People [pastoralists] treat their animals and would only see a professional once or twice in a season. There were CAHWs who were trained to treat animals but they no longer do that. The numbers of vets are very few and they only sit at the district headquarters and there are no local veterinary shops to provide the services.” (Livestock Trader)*

**Community Animal Health Workers (CAHWs) are a valuable local service provider but face an uncertain future.** CAHWs are stationed locally, trained to provide basic services to pastoralists in rural areas. In principle CAHWs offer a valuable level of local service and can act as agents for the supply of veterinary inputs into remote areas. In reality the quality of CAHWs has been variable (due to ad-hoc training) and due to the sporadic delivery of resources to the sector many are unemployed except as assistants to occasional emergency interventions.

An expanded role for community animal health workers (CAHWs) in future is undermined by their legal status: they are currently restricted from providing clinical services except under supervision

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<sup>30</sup> 90% of staff in one NGO, CIFA are originally from the region, with the majority graduates in an animal health discipline.

<sup>31</sup> Muktar, an agrovet in Gither, trained as an AHA and has worked with VSF Suisse and is now a Sidai franchisee. In Marsabit, an agrovet is owned by a Livestock Officer working for the government with day-to-day management performed by a privately employed AHA.

from a veterinary professional. In many areas CAHWs are the only source of local expertise and they continue to practice in an informal manner. However the result is an uncertain future: little or no further investment in training by NGOs and a slow degrading of CAHW resources for livestock service delivery.

**There are few long-term motivations for students to enter animal health training.** Few professional animal health opportunities exist in government due to a lack of regular funding for services. Training of community-based animal health providers is conducted by NGOs on an ad-hoc basis, dependent on the availability of funding<sup>32</sup>. Once trained, recipients face stiff competition and uncertain prospects for employment, due in part to legal restrictions limiting their potential role (certain services such as vaccines and clinical services which must be delivered under supervision of a qualified veterinarian).

**Coordination and duplication between roles is an ongoing challenge.** The County Steering Group (CSG) is a relatively untested evolution of the DSG, charged with coordinating local activities including animal health service delivery. DVOs report that CSGs are not yet fully functional and face challenges in the transition to county-based administration<sup>33</sup>. There is some hope amongst DVOs that county governments will invest greater resources in livestock services<sup>34</sup> including support to private sector suppliers, to stimulate growth in this sector. For the moment however service delivery remains split between actors in the NGO, government and private sector.

## Donor activities

### Scope of interventions

Donors provide funding for animal health interventions typically as a component in emergency response to crises in ASAL areas. Program implementation, including procurement and contracting for delivery, is normally conducted by multilateral agencies such as FAO, with NGOs operating in partnership with local government to deliver services. Generally NGOs maintain a geographic focus, operating within a fixed area of operation where their operations are established (normally a county or district).

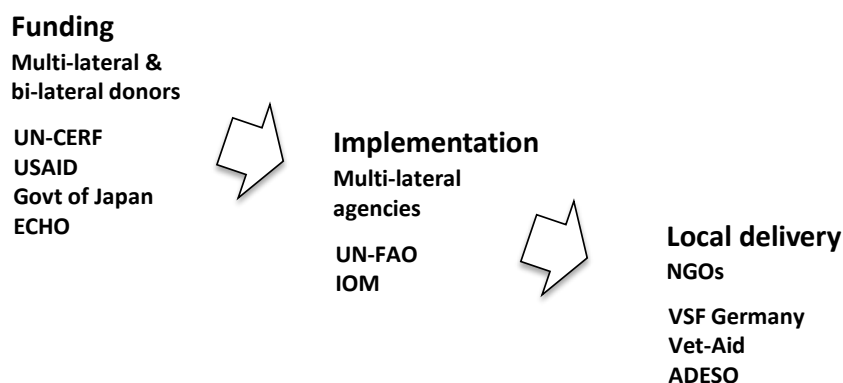
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<sup>32</sup> According to one recipient of this type of training, it is only conducted during and for emergencies, and not on a regular basis, which means that skills are rarely formalized and developed to a high standard.

<sup>33</sup> Challenges reported by DVOs include lack of attention from governors who are supposed to chair the group (in one case the governor sends his deputy) and lack of clear roles and responsibilities in the new county administration.

<sup>34</sup> Deputy DVO Marsabit and DVO Manderla both said they are expecting the county government to recruit more staff for the department.

## Structure of donor-led animal health activities



### Scale of activities

There is a lack of comprehensive data to describe the scale of animal health interventions across Northern Kenya. Data on funding for livestock interventions within these programs is dispersed between funding bodies, coordinating agencies, implementation partners and government. Multiple sources of data lead to gaps and potential overlap. For example government vaccination figures are often duplicated in program figures quoted by agencies or donors and implementing partners. The scope of AH interventions is also difficult to quantify as they take place within larger emergency response programmes with livestock health activities are often bundled with other emergency interventions such as de-stocking, water and food supply.

Available figures suggest that several million animals in ASAL areas are vaccinated and treated through free programs during an average drought year. The UN Central Emergency Relief Fund (CERF) is a major funder of such activities. Over the period 2010-12 funds allocated by UN-CERF to emergency programs including livestock support totaled US\$6m (see annex 9). Total CERF allocations to livestock activities 2010-2012 were US\$5,852,795 with a significant increase in 2011, a drought year. In 2006, 2007, and 2008, CERF funded the vaccination of “millions of animals” in pastoral areas.<sup>35</sup>

FAO is the largest single coordinator of activities<sup>36</sup>. According to FAO data, 5.7 million animals were reached by animal health interventions during the 2008-2009 drought<sup>37</sup>. According to research in 2009 the drought response by all agencies conducted 29 animal health interventions in 6 ASAL districts and provided support to 4,000,000 animals with an estimated average input cost of Ksh 50 (US\$0.58) per animal to an estimated total input value of \$2,320,000<sup>38</sup>. In 2006-2009 FAO Kenya provided 12.5m doses of PPR vaccine and also procured and supplied another 6.5m doses of PPR vaccine to other agencies including VSF Belgium, LWF, World Vision and 2.5m doses to the DVS<sup>39</sup>.

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<sup>35</sup> 5-year evaluation of the CERF

<sup>36</sup> FAO is the single largest coordinator of animal health programmes to Northern Kenya and the only major agency conducting local monitoring. It has conducted some useful evaluation studies which are used in this report.

<sup>37</sup> FAO-ILRI

<sup>38</sup> The Economics of Resilience: Catherine Fitzgibbon

<sup>39</sup> GALVmed

A range of interventions carried out using emergency fund during the period 2009-2012 are shown in the program examples below:

- In Garissa County in 2012, the IOM treated 42,217 animals and vaccinated 18,355, mostly for CCPP and PPR.
- A joint FAO-EU programme in 2009 provided EURO 4m to support livestock production in ASAL areas including vaccination programme targeting 950,000 animals.
- UNOCHA estimated that GoK allocated Ksh18billion (US\$219m) to drought response in 2011. In addition the World Bank and other donors channelled over US\$125m assistance via the Arid Lands Resource Management Project (ALRMP) which was responsible for 83% of interventions in six districts in 2011.<sup>40</sup>
- A 2011 CERF funded vaccination programme in NE Kenya targeted 94,787 small livestock and 7,528 large animals for vaccines against CCPP, PPR and Pox. 24 pastoralists were trained in CAHW skills<sup>41</sup>.
- In 2013 an ECHO-funded project in Isiolo and the surrounding area in partnership with VSF Suisse vaccinated 230,000 goats and sheep against PPR.
- In 2012 a project in Dadaab, Garissa County funded by the Government of Japan and implemented by the FAO provided vaccines for CCPP/PPR and de-worming treatment to 406,500 animals in partnership with local NGOs ADESO, VSF-Belgium, VSF-Suisse and CARE International.
- In 2011 a USAID funded program implemented by FAO and delivered by 5 un-named partners vaccinated 1,004,828 animals for PPR, RVF, CCPP and CBPP and de-wormed 1,070,554 animals as part of a wider drought response program in Northern Kenya.

The ad-hoc nature of program-based funding means that animal health interventions typically fluctuate irregularly, with the number of interventions increasing during drought years and decreasing during “ordinary” periods where there are few regular vaccination or treatment programmes available. Total UN-CERF allocations to pastoral areas in 2012 (a normal year) were around half of the allocations in 2011 (a drought year).

### **Motivation for emergency response**

The release of donor funding to livestock health activities is largely triggered by the onset of drought emergencies. In order to predict the onset of emergencies donors make use of formal drought projections from the Government of Kenya including reports from the Arid Lands Resource Management Project (ALRMP) and short/long rain food security assessment reports from the National Drought Management Authority (NDMA) which predict weaker than normal rains. Formal reports are supplemented by information from NGOs active in drought-prone areas.

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<sup>40</sup> UNOCHA Data

<sup>41</sup> CERF Year in Review: 2011

Modern drought early warning systems are capable of predicting drought with greater accuracy<sup>42</sup>. However it is not clear that funds are always released appropriately: senior sources within donors and NGOs interviewed during this study<sup>43</sup> have argued that many activities are motivated by the political imperative to act following drought warnings and the consequent availability of funds, rather than a calculated assessment of needs and potential impact.

NGOs lack the capacity to respond unilaterally to emergencies and are therefore actively engaged in providing information to donors on needs in order to secure funding to address those needs. NGOs rely almost entirely on the release of such funding to undertake their operations. It has been argued by some NGO professionals that the lack of regular sustainable funding creates an incentive for NGOs to lobby donors and even to exaggerate the need for emergency funds in order to maintain their operations. Where this occurs there is a systemic problem: the activities are less likely to address genuine long-term needs, and donor-dependency is perpetuated amongst both NGOs and the eventual recipients of subsidies.

*During emergencies there is a lot of press attention, resources and aid. So NGOs have the opportunity to get funding because politically donors are forced to do it. The system is lacking in normal times because funds are only available during emergencies.*

*Multilateral agency officer*

## Impact of donor programs

### Technical impacts

Donor funded services are delivered largely based on the availability of funding and NGO-led emergency needs assessments, as opposed to the regular needs of pastoralists. Services are often delivered with good intentions but little regard for the best technical approach to achieve long-term impact. As services are delivered free of charge, pastoralists are inclined to accept them regardless. In many cases the effect of these interventions is limited. At worst they can be damaging to animals, and to the market system.

### Inappropriate interventions

Delays in the implementation of drought-funded interventions are responsible for the inefficacy of many services. The process of responding to emergencies involves specific steps: recognition of the emergency needs, allocation of funds, disbursement of funds to implementers, targeting of beneficiaries, and procurement of inputs and distribution of inputs to beneficiaries. This process can be subject to numerous delays and bottlenecks – a general problem with response-based measures. In the case of livestock disease, the lack of available services and reliance on emergency response can be damaging. Several professionals in the livestock and humanitarian response sectors raised the issue of untimely interventions caused in part by delayed response, a problem also referenced in numerous studies<sup>44</sup>.

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<sup>42</sup> USGS: New Satellite Observations and Rainfall Forecasts Help Provide Earlier Warning of African Drought

<sup>43</sup> See Annex 10: Office-based Interviews (redacted)

<sup>44</sup> See Oxfam (2012) A dangerous delay: the cost of late response to early warnings in the 2011 drought in the horn of Africa, and Jost, C. et al (2010) Epidemiological Assessment of the Rift Valley Fever Outbreak in Kenya and Tanzania in 2006

Emergency-funded livestock programs typically deliver inputs during the drought, a time when animal body condition is weakest. For vaccinations and other preventative livestock health activities this is poor practice: LEGS guidelines note that animals should be vaccinated or de-wormed on a regular basis and preferably prior to drought conditions, depending on the local disease situation<sup>45</sup> to avoid unnecessary risk. The low impact of vaccination programs conducted during drought was emphasized by numerous livestock health professionals contacted during this study and has been referenced in academic studies<sup>46</sup>.

Nevertheless this response is still common in Kenya. Pastoralists, livestock traders, NGOs and government officials contacted in this study all stated that vaccination programs are generally delivered in drought and not during ordinary periods. A donor-funded report assessing responses to the 2008 drought is critical of this practice. It noted that lack of routine funding meant vaccinations were given during the drought when emergency funds became available, and that this approach was often inappropriate, expensive and had less impact on the health of animals<sup>47</sup>. An evaluation conducted by FAO in 2012

*There is little evidence to show the benefits of mass vaccination during crises.*

*Humanitarian Response Professional*

following mass anthelmintic distribution during drought observed no evidence that delivery had a positive impact on livestock body condition or productivity. In Marsabit, livestock professionals even linked the death of weaker animals to inappropriately timed vaccination programs.

In addition, certain treatments are commonly administered without adequate assessment of need.

De-wormers in particular are delivered in a blanket approach targeting all animals in a catchment area in an apparent effort to simply administer target doses with little evidence that helminthes are present. De-wormers considered a “low-risk” intervention by NGOs and donors alike, and as a consequence funding for de-worming activities is readily available. This is technically inappropriate and can lead to problems with drug immunity, as well as being wasteful from a resource perspective. Veterinary professionals based in the region expressed their frustration at the indiscriminate manner in which programs are delivered.

*De-wormers are administered indiscriminately rather than targeted...NGOs are guaranteed funding for de-wormers, they tick the box but have low if any risk.*

*Veterinary Research Professional*

As a consequence the impact of programs is reduced and sometimes even negative, leading livestock owners to have a distorted view of vaccines and commonly provided treatments such as de-wormers. First, many pastoralists believe that such inputs should only be given during drought situations and not on a regular basis. Second, the limited (and sometimes damaging) impact of poorly timed vaccinations has convinced some pastoralists that vaccines are a risk to their animals.

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and 2007 in which a vaccination campaign in response to the 2006-7 outbreak of RVF was judged ineffective due to response delays.

<sup>45</sup> LEGS Published Guidelines, 2013

<sup>46</sup> Catley et al (2009) Impact of drought-related vaccination on livestock mortality in pastoralist areas of Ethiopia, showed no significant difference in livestock mortality, for any species, in vaccinated compared with non-vaccinated herds when conducted during drought.

<sup>47</sup> ILRI (2010) An assessment of the response to the 2008-2009 drought. A report to the European Union.



The negative perception and lack of understanding towards regular, preventative vaccination is a major problem. When combined with habitual free supply it manifests itself in low uptake of private vaccines where they are available and slows the emergence of a private vaccine chain.

**Case Study: Mass anthelmintic delivery in Isiolo and Marsabit Districts, 2011**

*Mass anthelmintic (de-wormer) administration was conducted as part of a range of emergency responses to drought in December 2011-January 2012. A total of 1 070 554 mixed livestock were targeted across North and North-Eastern Province.*

*In Isiolo district, these were delivered in partnership with the DVO and a joint livestock team, to any livestock found at communal watering points. In Marsabit, inputs were supplied by local agrovets and distributed to selected livestock owners (most vulnerable) via a voucher system.*

*An evaluation conducted by FAO in 2012 noted several problems. There was no evidence that delivering anthelmintic during the drought had a positive impact on livestock body condition or productivity. Second, delays in implementation meant that the livestock originally targeted in the programme had moved and inputs were simply provided to the nearest/most available animals. Some de-wormers entered the market, depressing prices, and according to professionals based in the area these drugs are still circulating in the market at end of 2013,*

## Market impacts

### Competition from free services

The habitual provision of free inputs and services to millions of animals every year has a damaging effect on the willingness of livestock owners to pay and prevents the emergence of a market. Although legally speaking vaccines are private goods, delivery of free services by government in partnership with donors and NGOs has convinced pastoralists (and many private agrovets) that services are not the responsibility of the livestock owner but “public” goods. Treatments such as de-wormers are also provided on a regular basis through donor programs.

*NGO interventions can easily drive agrovets out of business...once animals are dewormed and treated the farmer may not need to purchase drugs for up to 4 months.*

*Agrovet*

*It is the work of government to treat the animals.*

*Pastoralist*

The impact of free interventions undermining demand for paid services has been observed in other regions<sup>48</sup> and has corroborated by this study. Interviews show that the majority of pastoralists themselves believe vaccination to be the domain of

<sup>48</sup> Mercy Corps (2013) Making the input supply market work for the poor: case study from the Somali region of Ethiopia, shows that free interventions have a distorting effect on demand for paid services, undermining the emergence of a working market

the government and NGOs<sup>49</sup>, and have come to expect free services. They consequently wait for services to be delivered, which occurs during emergency periods. Meanwhile demand for paid services is severely undermined. Numerous private service providers reported the damaging effect of donor subsidies on their business<sup>50</sup> particularly during and after the time when subsidized products are supplied into the market.

A further damaging consequence of competition from free products is to drive down prices for inputs, creating a preference for cheaper, low quality goods when free products are unavailable. A number of private suppliers reported that they had switched to supplying cheaper drugs due to the impact of freely distributed inputs. This distorts the market by fueling acceptance of counterfeit and poor quality imports at low prices instead of genuine goods. A “race to the bottom” on quality and price contributes to poor levels of service to livestock owners, perpetuating the broken system of livestock health services in Northern Kenya.

*Donor subsidies drive down prices. If I can't sell product then I will join the band wagon [with cheap low quality product].*

*- Inputs Wholesaler*

### **Leakage of free/subsidized inputs into the market**

The diversion of free products into the market to be sold at subsidized rates to pastoralists undermines the competitiveness of these and other products delivered through the private supply chain.

As earlier described, free inputs are delivered and stored with the local veterinary department before being administered by joint teams of NGO and government staff. Verification is conducted through various means including the counting of empty containers, field recording and stock taking. In some cases a surplus of products remains behind for distribution/use by government or NGO staff. The system is reliant on trust and presents opportunities for leakage. Numerous interviewees reported that they had witnessed free products in the market following free campaigns<sup>51</sup>. It was suggested that leakage occurs both through government and NGO channels. These allegations are impossible to verify but the common response points to a system in which leakage occurs regularly and probably through multiple routes.

*Following subsidies the market becomes flooded with inputs. The diversion is either from DVO or NGO personnel. At the time prices of drugs sharply decline.*

*Agrovet*

The scale of product diversions is impossible to verify in this study but appears to be common. Incidences of free product diversion into the market were noted across the entire region by numerous private professionals and NGO staff<sup>52</sup>. Problems with accountability have even been formally acknowledged at a donor/implementation level. An official FAO evaluation of emergency

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<sup>49</sup> See Annex 11: Field interviews (redacted)

<sup>50</sup> See Annex 11: Field interviews (redacted)

<sup>51</sup> See Annex 11: Field interviews (redacted)

<sup>52</sup> See Annex 10: Office-based interviews (redacted) and Annex 11: Field interviews (redacted).

animal health activities noted the potential free products to be diverted away from the programme but made no specific reference to reported incidents<sup>53</sup>.



### 5 Trading in Moyale

A number of interviewees reported that they had witnessed free products being sold in the market following free campaigns. In one case, following a mass treatment program carried out in 2011, the market was flooded with de-wormers and antibiotics which became available through multiple retail channels. As a consequence the market price for de-wormers and antibiotics declined by around 50%. Whilst these products were initially sold through informal channels a number of private businesses adopted the view that “if you can’t beat them, join them” and began offering the diverted drugs in their outlets alongside other products<sup>54</sup>. The source of these diverted products could not be verified although respondents assume the source to be either NGO or government staff. There are reports that diverted drugs are in demand from pastoralist due to perceptions that the quality of government drugs is high.

*A hawker who was selling multivitamin 100ml for Ksh 80 told me “ni dawa ya serikali” – it is government drugs.*

*Agrovet / trader*

The impact of diversions on the sustainability of the private supply chain is serious. Although local retailers are able to “enter the game” by selling such drugs when available, the principle damage occurs to distributors and suppliers of genuine inputs who find themselves out-competed by a locally available supply of almost-free inputs. Local retailers are also unable to sell previously procured stock and it could expire while they sell diverted drugs. Although such disruptions are often short-term, occurring during or immediately after free programs, the effect of these disruptions is to undermine the long term business case for supplying inputs to the region, further suppressing willingness to pay amongst livestock owners and making genuine products supplied through a normal supply chain appear uncompetitive.

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<sup>53</sup> In FAO (2010) Final evaluation for the VSF-Suise ERF project in greater Isiolo district: “There was a potential window of unethical behavior as the redemption of vouchers depended on taking back an empty jerry can. What could stop someone from pouring off and taking back the empty?”

<sup>60</sup> See Annex 11: Field interviews (redacted)

<sup>54</sup>

### Adoption of counterfeit goods

The market faces a serious challenge from counterfeit products, with agro-vet suppliers estimating that up to 80% of products sold in the market are direct counterfeits or low quality alternatives<sup>55</sup>. The impact of counterfeits on efficacy is difficult to ascertain outside clinical trials (due to the fact that misuse of genuine drugs can also lead to poor clinical results). However, veterinary professionals contacted in the region unanimously agree that counterfeits represent a major problem in disease control.



*We often stock the counterfeits to sell to those who demand them but educate the pastoralists on their efficacy and then the choice is their own. Unfortunately maybe less than 10% of pastoralists know the difference between genuine and counterfeit drugs.*

Agrovet Retailer

### 6: Genuine (R) and counterfeit (L) de-wormers on sale in the study area

**Market distortions are a major driver of increased counterfeiting:** the supply of free drugs and leakage of donor-supplied products into the market at low prices drives quality downwards, and increases acceptance of cheaper alternatives. The ability of government to enforce quality standards is extremely limited<sup>56</sup>.

**A number of agrovet interviewed stock both genuine products and low quality or counterfeit alternatives** (see picture) because not to do so would mean missing out on a major segment of the market.

There is a clear price difference between counterfeit and genuine drugs in the market. Counterfeit/non-labeled drugs are between 20% and 50% the price of genuine drugs (see Annex 6). The research team collected some samples, provided with the field research component of this report.

The most common **route to market** for counterfeit drugs is via cross-border trade from Somalia and Ethiopia. The source of drugs generally depends on proximity to borders: imports from Somalia are common in North Eastern areas whilst Ethiopian imports are common across the North. Products

<sup>55</sup> Treatments are most regularly counterfeited, with antibiotics and de-wormers the most commonly seen in the market. Counterfeit drugs are often labeled as common brands and difficult to distinguish. Others use generic names and are packaged as cheaper alternatives.

<sup>56</sup> Lack of capacity to enforce quality standards for veterinary inputs is acknowledged in the Government of Kenya document, Vision 2030 Development Strategy for Northern Kenya and other Arid Lands.

are imported through informal networks and distributed by independent traders, who sell the products directly to outlets, often in a “bundle” of other products (often human drugs).

Counterfeit products **damage the quality of service**, leading to increased disease resistance amongst animals<sup>57</sup> and potential contamination of livestock products due to poor quality or inappropriate ingredients. Damage to the market for genuine goods is equally severe. According to officials in one region counterfeits are “available everywhere and are one of the biggest challenges to quality agro-vet suppliers”. A major national dealer of genuine products claims to have lost 80% market share in last 5 years due to counterfeits and low quality products in the market.

### Principal-agent problem

The donor-funded livestock health system causes a systemic problem in which NGOs (agents) are not motivated to act in the long term best interests of livestock owners (principals) due to the regular incentive of short term donor funding. The flow of emergency funds into NGO-led livestock health services has created a well-financed and well-organized non-profit sector geared towards delivering services, but dependent on donor funding to do so. NGOs “compete” for donor funding and have a clear interest in the continued flow of those funds to keep staff employed and operations functioning. In so doing, **this**

*NGOs create an entire economy around their activities in the region*

Veterinary research professional

**unsustainable system absorbs valuable material and human resources from the market**, whilst its free services out-compete the undeveloped private sector and prevent the emergence of a sustainable alternative.

### Distorting the market for animal health professionals

The network of NGOs delivering donor funded services across Northern Kenya employ qualified animal health personnel to manage the delivery of emergency programs. Salaries offered in the sector are typically several times higher than a professional could earn in a government job or as a private service provider. NGOs also offer part time employment to community livestock health workers to support service program delivery, and pay generous per-diem allowances to government personnel engaged in partnerships to deliver animal health services.

*Nearly all livestock health professionals in the region have either left, or work in the NGO sector. Hardly any are practicing because the opportunities are elsewhere.*

Livestock health development expert

The distortions created by such employment are significant. At a government level where resources are extremely limited, the opportunities to earn supplementary income delivering donor-funded services is a welcome addition to a poor pay package. A number of professionals and government officials contacted in this study described a near total dependence by government on the provision of support from donors and NGOs. There are few incentives for government livestock health officials to provide any services outside of those supported by NGOs.

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<sup>57</sup> Previous studies cite a particular concern of increasing resistance of trypanosomiasis to existing drugs due to low-quality product use (Peacock).

Within the private sector, as discussed previously, the market opportunity to provide inputs and clinical services is undermined by donor-driven activities. Private service providers face periodic competition from free products and services, most often during drought periods. To offset this many seek NGO employment on a seasonal basis to assist with the delivery of services. The good wages offered within the NGO sector are a powerful draw to any livestock health professional based in the region. However, NGO based employment opportunities are inherently dependent on the continued flow of donor funds and do not sustain those human resources beyond the life of a funded intervention and to meet regular needs.

The drain of human capital away from government and private sector and towards NGO is self-perpetuating. With underfunded government services, few private sector opportunities and sporadic delivery by NGOs, mainly during emergencies, many young graduates from the region choose alternative careers. Those few who do qualify as livestock health professionals are faced with a choice: struggle to provide private services in a distorted market system or join the gravy train? The accumulation of expertise and human resources within NGOs results in re-enforcement of their role as the primary agents of livestock health services in the region, and encourages the channeling of future donor funds through the NGO networks. The long-term impact is to divert human resources away from building the capacity for alternative sustainable market-based service delivery.

*There is demand for veterinary service but opportunities in the private sector are limited, so I need first to look for a job, with an NGO in order to start my career and get some capital.*

Newly qualified vet, Marsabit

### **Inflation of market for services**

While donor-funded livestock interventions drive down the price of livestock health inputs and services causing a “race to the bottom”, emergency response measures often inflate the price of many other goods and services which makes private sector activity even more difficult. Price inflation in the local economy is caused by increased demand for goods and services and the willingness of NGOs with little incentive to contain costs paying above market rates for those services. Local development officers based in the region report that the prices of labor, transport and basic commodities are all subject to inflation in response to an influx of emergency funding.

*In 2011-12 NGOs came to Marsabit providing emergency services – prices for everything went up and the local economy was much worse-off.*

International NGO Consultant

The effect of price inflation on providers of private livestock health service is to make them even less competitive in the market. During and after emergencies they face a general increase in the cost of doing business driven by wage inflation and increases in basic costs such as transport and consumer goods, undermining their ability to compete in a highly price-sensitive market. Furthermore agro-vets reported difficulties attracting qualified animal health personnel, who are drawn by higher salaries elsewhere, particularly within NGOs.

## Conclusion and recommendations

### Technical recommendations

This report has raised a number of issues relating to the way in which services are delivered under the current system, impacting on their effectiveness. Ultimately, pastoralists need access to regular, quality services where they are needed. Achieving this requires action on a number of levels to reform the way in which services are funded and delivered. In the meantime, regardless of delivery method, there are technical recommendations that should be followed in line with best practice as outlined by livestock health professionals and in published guidelines.

*You cannot ignore the immediate needs but you also cannot upset the future needs.*

*Senior Director, Donor*

- Ensure that services are delivered on a needs basis, reducing the risk of waste or inappropriate use of treatments such as de-wormers and vaccines as has occurred in a number of programs. Indiscriminate dumping of free products into livestock populations can be clinically damaging as well as distorting the market system.
- Where possible and deemed appropriate by cost considerations, adopt the principle that prevention is better than cure, especially with regard to regular vaccination for common diseases. Vaccinating animals during the drought, although convenient from a funding perspective, violates widely accepted clinical guidelines. A shift towards preventative vaccination would improve the efficacy of vaccines when administered as well as perceptions of their value for preventative care amongst pastoralists.

### Delivery recommendations

The existence of competing public and private delivery of livestock health services and the dominance of donor-funded interventions has created distortions that prevent the emergence of affordable quality animal health services to livestock owners. This report argues that subsidies and ad-hoc relief programs, largely driven by donor funding and put into practice by NGOs, have damaged the market system and created a government service geared towards donor-funded delivery of services that could be performed by other actors. The effect of this is to prevent the emergence of sustainable alternative systems.

*The NGO and DVOs interventions are not sustainable and can only support pastoralists at the time of crisis. Business can bridge the gap in the availability of animal health products and so donors, NGOs and DVOs should support these businesses.*

*Livestock service provider*

The modus operandi of emergency-funded donor interventions has become ingrained within the market. Although many actors within that system identify problems, they are unable to change the way in which services are delivered due to the system being highly entrenched at every level. This is partly due to the short-term incentives created in which actors throughout the chain, from donors to government, NGOs and livestock owners are incentivized towards maintaining the status quo. During the course of this study some respondents were reluctant or too scared even to discuss the prospect of the system evolving. However the message from experts from across the sector is quite clear and unanimous – the system is broken and is not serving livestock owners.

This study is not intended to dictate the “right” solution, nor to try and offer a silver bullet towards achieving a fairer and more sustainable system. We advocate a stronger role for the private sector but not an overnight switch in service provision – the private sector currently lacks the capacity to deliver services and needs to be enabled to develop that capacity. It also faces a serious challenge from the external environment – undeveloped demand over a vast area with poor infrastructure would make private sector activity difficult even in the absence of other distortions. However, for change to happen, the key thing is for something to start, however small, to get momentum going in a new direction. The following are some examples of what might be some achievable first steps towards creating conditions in which the capacity of private services can be built and harnessed to improve delivery to livestock owners.

1. Address and reduce the distortions created by free products on the market, allowing greater room for the development of private services and preventing a “race to the bottom” on quality and price that does not benefit livestock owners. Specifically:
  - a. Minimize unnecessary free distribution of inputs and provide only necessary services free of charge (e.g., responses to severe disease outbreaks). Whilst a complete switch away from free service provision is not realistic in the immediate term, minimizing free input distribution would create room for the emergence of alternative service providers replacing emergency-based input and service provision (see #4, below).
  - b. Improve the accountability in the distribution of necessary free inputs to livestock owners to prevent leakage. It is clear from this study that diversion of free products into the market is creating price distortions and undermining private supply chains. Donors and NGOs must urgently reduce the leakage of free products through more vigorous monitoring of the delivery process, right down to the point where animals are administered with vaccine/treatment.
  - c. Where free or subsidized services are deemed appropriate due to the absolute lack of paid demand, donors and NGOs should consider replacing mass distribution with “smart” subsidies to provide better quality and more targeted free/discounted services to pastoralists. Smart subsidies can make use of local private service providers to deliver services at a subsidized cost (or free of charge) to the most vulnerable livestock owners. Although this violates the principle that services should be paid for by the end user, in an undeveloped market the delivery of appropriate inputs on a regular basis through targeted subsidies can help to “prime” the market for quality services later on.
  - d. Make greater use of local procurement of inputs for free/subsidized products. Although this does not address distortions with demand from free products amongst livestock owners, it would help to develop a viable regional supply chain for livestock health products and services that would persist beyond the free program and it would provide an income stream for these businesses during campaign periods to enable them to trade through. There will be clear challenges with governance, particularly ensuring that local services are procured in a transparent and competitive manner. There will also be



challenges procuring the volumes needed from such under-resourced small suppliers, but this should not mean bypassing them altogether unless absolutely necessary. Market development will take time but is best begun through backing multiple entities to promote competition and supporting the market: the development of risk management systems to minimize risk concerns, identifying efficiency gaps and promoting the piloting of new models by companies operational in other regions but currently see limited opportunity in northern Kenya. Attention should be paid towards minimizing any distortion from the impact of support or subsidies wherever given.

- e. At a local level, engage private providers increasingly in service delivery for publicly funded campaigns, expanding their role to provide sustained services rather than diverting human and material resources towards the NGO sector. The undeveloped private sector means that this may not be possible in all areas, however efforts to gradually engage private providers will help to reverse this. Whilst not fully addressing the distortions in the system, this would at least start to build the capacity of a cadre of private service providers ready to deliver services across the region and help them build out their reach through field agent networks.
2. Make small but meaningful shifts in the policy environment for certain categories of inputs and services including vaccines, by increasing awareness of legislation and directing support towards the market.
    - a. Create clear guidelines for the private sector to engage in procuring and distributing vaccines, making them available in the region on a routine basis. Currently the policy on vaccine distribution is ambiguous, with a strong perception amongst many private agrovets that vaccines are the domain of the government. A policy to enable greater private sector engagement in vaccine supply should be clearly disseminated to actors throughout the region, through government awareness programs possibly with support from donors/NGOs.
    - b. In addition to or instead of directing funds towards resourcing government vaccine programs, provide donor support to local livestock officials in a new and expanded role helping to promote the regular use of vaccines, procured through the private sector as well as some donor-funded vaccine programs conducted on a needs basis. In addition, livestock officers can be given the support (and incentives) to conduct closer monitoring and control of counterfeit inputs sold openly in the market, reducing the damage they cause in downward pressure on quality and price. Such support would be a valuable use of long term donor funding to build a more favorable market environment.
    - c. Consider creating an enabling policy environment for community animal health workers (CAHWs) to provide basic diagnostic and clinical services to pastoralists. They constitute a potentially valuable extension service on behalf of veterinary professionals, as well as a crucial supply chain for inputs to remote areas. Such a policy should use certification

to promote quality and consistency in training, and also consider the role of veterinary professionals as supervisors and trainers for a network of local service providers.

3. Establish a platform in which donors, government, NGOs, the private sector and livestock owners can convene to collaborate on improving the system of livestock service delivery, and specifically enabling the market to play a more appropriate role. Within this forum, create capacity within NGOs, donors and governments for a central resource to collect and coordinate information on livestock services delivered by the various actors (a major problem faced during this study was a lack of centralized information on actual livestock service delivery – collecting this data would shine a stronger light). This platform could be useful to discuss appropriate roles for public and private entities, including hybrid organizations such as social enterprises in an emerging mixed model of service delivery in which market actors play a key role.
4. Donors, NGOs and private sector could undertake action-based research to support the extension of private service provision into Northern Kenya, seeking opportunities to test alternative models for livestock services. Potential approaches include: PPP funded program delivery where private operators provide services on behalf of government or donors; voucher and cash transfer systems targeting the most vulnerable livestock owners; and development impact bonds<sup>58</sup>. These activities could occur at a fairly local level in order to test their application. Support to such experimental programs would be a more effective use of donor funds fostering innovation and engagement rather than dependency.

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<sup>58</sup> Detailed info available at <http://www.cgdev.org/page/development-impact-bond-working-group>

## Annexes

### Annex 1: Existing production and potential demand for livestock vaccines in Kenya

Estimates of market size for three common vaccines, PPR, CCPP and CBPP show high potential demand across Kenya. The figures below are national but a significant portion of the market exists in ASAL areas which account for 70% of livestock and are prone to the diseases in question.

#### Production and market potential – vaccines for common livestock diseases

Disease	Estimated vaccine market (#doses/year)	Production capacity (KEVEVAPI)	Current coverage*
PPR	15,000,000	10,000,000	1,000,000
CCPP	5,000,000	5,000,000	500,000 - 1,000,000
CBPP	5,000,000	10,000,000	900,000

*\*The majority of current coverage is procured through a public supply chain and free at the point of delivery.*

Vaccination against PPR would target the population at risk – 15 million plus sheep and goats. The demand for the vaccine on a yearly basis translates to about 15 million doses. On the other hand, according to the DVS, the demand for the PPR vaccine in the country is 20 million doses per year. The government is normally able to procure only 1 million doses, leaving a deficit of 19 million doses (DVS, 2010).

Capacity does not meet potential demand due to lack of public sector funding: the DVS's annual potential demand for CCPP vaccine stands at >5 million doses. However, the government and donors only procure up to 1 million doses or less annually due to funding constraints.

### Annex 2: Common livestock diseases in study area

#### Common livestock diseases in study area

Name	Animals affected	Prevalence	Control
Contagious Bovine Pleuro Pneumonia (CBPP)	Cattle	Outbreaks	Vaccinate annually
Contagious Caprine Pleuro Pneumonia (CCPP)	Sheep, goats	Endemic	Vaccinate annually
Foot and mouth disease (FMD)	All ruminants	Outbreaks	Vaccinate 6 months
Lumpy Skin Disease (LSD) or Sheep/Goat pox	Sheep, goats	Endemic	Vaccinate annually
Peste des petit Ruminants (PPR)	Sheep, goats	Outbreaks	Lifetime vaccine

Anthrax	All ruminants	Outbreaks	Annual vaccine with BQ
Black quarter	Cattle	Endemic	Annual vaccine
Rift Valley Fever (RVF)	All ruminants	Outbreaks	Vector control / vaccine
Trypanosomiasis (Sleeping sickness)	All ruminants	Outbreaks	Vector control
Helminthiasis (worms)	All ruminants	Endemic	De-worming

### Annex 3: Project delivery schedule

#### Project delivery schedule

	4 Nov	11 Nov	18 Nov	25 Nov	2 Dec	9 Dec	16 Dec	23 Dec	30 Dec	06 Jan	13 Jan	20 Jan	27 Jan
	wk1	wk2	wk3	wk4	wk5	wk6	wk7	wk8	wk9	wk10	wk11	wk12	wk13
Kick-off Workshop													
Desk research													
Key informant interviews													
Field research interviews													
Analysis & Drafting													
Draft presentation													
Final delivery													

### Annex 4: Veterinary human resources recorded in Northern Kenya

County/ward	Human resources available	Source of information
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Moyale	1 vet, 2 livestock officers and 3 AHAs. Additionally 4 unemployed AHAs.	Sololo Agrovet Roba
Mandera County	4 DVOs (one at each sub county level). They lack support staff.  In Mandera county also 2 Livestock officers and a number of AHAs. Additionally +/- 10 AHAs work for NGOs and other organizations. Most livestock officers are unemployed. All CAHWs are inactive.  Local vets working with NGOs.	DVO Office  DVO Office  NGO Staff
Mandera East	3 technical staff, one providing clinical services	Mandera Agrovet Noor Mohamed
Marsabit Central	One vet, 2 AHAs and 10 active CAHWs mostly recruited by the government.	Deputy DVO Marsabit
Wajir County/ Wajir South	Wajir South has 1 vet, 2 Livestock officers, 2 AHA. Wajir county has total of 15 professionals employed across county for 3 divisions and 11 wards.  Unknown number of CAHWs trained by NGOs, a few of whom are involved in treating animals.  There are also 5 AHAs and 4 LOs who are unemployed.	Livestock Officer, Wajir

#### Human resources in study area

Human resource	Summary of role	Efficacy/coverage
County Steering Group (CSG) (formerly DSG)	Coordinate interventions across government, NGOs and other partners. Chaired by county governor.	Active but only partially effective due to administrative transition
District Veterinary Officers (DVO) and administrative staff	Maintain stocks of vaccines, conduct livestock disease monitoring, coordinate the delivery of government/NGO vaccine programs.	Located in major towns, lack field staff and equipment to deliver. Reliance on NGOs for resources to deliver programs.

Livestock Officers (LOs)	Coordinate AH activities under the DVO.	Normally present at sub-county or division level.
Animal Health Assistants (AHAs)	Working under the DVO. Support services by supplying veterinary drugs and supervising administration. Used to support CAHW service delivery.	Some active at sub-county or division level. Lack of opportunities means many are unemployed.
Community Animal Health Workers (CAHWs)	Locally stationed, trained by NGOs. Provide private services and support delivery of Govt/NGO programs. Lack legal standing for AH service delivery, now known officially as Community Disease Reporters (CDRs).	Some active locally despite legal restriction. Many unemployed or reliant on govt/NGO programs.
NGO Field staff	Program implementation and monitoring, training of CAHWs, delivery of some services in partnership with DVO. Made up of many ex-professionals.	Active across study area due to employment opportunity.
Stockists (agrovets)	Veterinary consulting/clinical service to customers. Expertise is inconsistent but many are owned/managed by vets, or AHAs with field experience.	Present in major towns and centers. Often not reaching rural areas due to high cost.
Licensed veterinarians	Providing some clinical services to livestock owners but opportunity is very limited. Support to government activities (eg vaccine programs).	Very few practices in study area. Only one recorded in Wajir.

*Source: Primary research*

## Annex 5: NGOs active in study area

Location	Active organisations
Marsabit (inc Moyale)	VSF-Germany Pastoralist Integrated Support Programme (PISP) Christian Community Services (CCS) GTZ Concern Worldwide SOS Childrens Villages Food for the Hungry Solidarites International World Vision Kenya PACIDA
Mandera	VSF-Suisse COOPI NALEP CARE Intl Practical Action PACIDA

	Islamic Relief
Wajir	VSF-Suisse Arid Lands Development Focus (ALDEF) PIDAD Islamic Relief
Garissa	VSF-Belgium ADESO PACIDA CARE Kenya

### Annex 6: Price of genuine vs counterfeit treatments in the market

Product	Category	Price of genuine drug	Price of counterfeit	Location
Oxytetracycline 10%	Antibiotic	Ksh 163	Ksh 110	Marsabit
Albendazole 2.5%	De-wormer	Ksh 183	Ksh 150	Marsabit
Ivermectin	De-wormer	Ksh 300	Ksh 150	Marsabit
Ivermectin 100ml	De-wormer	Ksh 300	Ksh 100	Wajir South
Oxytetracycline 100ml	Antibiotic	KSh 250	Ksh 100	Wajir South
Ivermectin 100ml	De-wormer	Ksh 300	Ksh 150	Sololo

Source: Field research

### Annex 7: Inputs commonly available through private channels

Product Type	Product
<b>Anthelmintic (de-wormer)</b>	Albendazole, Tremazole, Ivomectin
<b>Antibiotic</b>	Norodine, Alamycin (Oxytetracycline), Penstrep, Tylocin
<b>Trypanocide (anti-parasitic)</b>	Triquin, Samorin, Novidium, Berenil
<b>Acaricide (parasite control)</b>	Tickfix, Norotraz, Triatix, Sevin powder
<b>Other treatment</b>	Kaolin (anti-diahorreal), Stop-bloat, Epsom salt, Wound dressings, Disseptoprim bolus

Source: Field research

## Annex 8: Qualified Vets from Northern Kenya

### Where are they now?

Mohamed M Yussuf	Independent Consultant
Dr. Arero	ACDI/VOCA Marsabit/Isiolo
Dr. Boku	Sidai Eastern/Northeastern Region
Dr. James Dokhe	County Secretary, Livestock, Marsabit
Dr. Sukunatu	Adeso
Dr. Guyo Shanda	DVS, State Vet Officer, Marsabit Central
Dr. Golicha	VSF Belgium
Dr. Diba Wako	VSF Suisse Team leader, Puntland, Somalia
Dr. Lolkote	Sidai (Samburu, Mt Kulal)
Dr. Wario Sake	ILRI
Dr. Lipa	Northern Rangeland Trust (Lewa)
Dr. Ali	VETAID
Dr. Haret Hambe	VSF Belgium
Dr. Abdirashid Mohamed	DVS, State Vet Officer, Namanga
Dr. Mohamed Keinan	National Drought Management Authority, Garissa
Dr. Yussuf Hassan	Retired (Member, Public Service Board, Wajir County)
Dr. Ismail Abdile	ICRC, Somalia
Dr. Kunow Sheikh	Reading (Msc), UK
Dr. Nuh Nassir	County Speaker, Tana River County



## Annex 9: Emergency funding to Kenya through CERF 2010-12

Year	Program	Partner agency	Total value US\$
2012	Saving lives through sustaining pastoral economies	FAO	1,000,423
2011	Support to pastoral and agro-pastoral communities affected by La-Nina	FAO	670,000
2011	Support to pastoral and agro-pastoral communities affected by the effect of drought	FAO	2,082,452
2011	Immediate emergency livestock support to refugee hosting communities affected by the looming 2011 drought and spill over effects from the massive refugee influx in North Eastern Kenya	IOM	399,988
2011	Emergency livestock support to refugee hosting communities affected by effects of protracted and extreme climatic conditions in North West Kenya	IOM	180,001
2010	Emergency support to pastoral and agro-pastoral households affected by extreme climatic conditions	FAO	1,519,931
2010	Immediate livestock support to pastoralist host communities affected by impacts of recurrent droughts and floods	FAO	180,103

*Source: CERF programme data*

## Annex 10: Office-based interviews (redacted)

Attached separately.

## Annex 11: Field interviews (redacted)

Attached separately.