Integrated Disease Control in a Devolved System in Kenya:
Case of Turkana County

Summary
Although more than 75% of Kenya’s livestock are in the Arid and Semi-Arid Lands (ASALs), they are served by less than 10% of livestock service staff. Because most ASAL areas are considered a hardship post and few veterinary staff want to work there. Several animal health service interventions in the region can be classified as emergency responses which in most cases fail to adequately address the problem of recurring epizootics and livestock deaths. The ReSAHiMaP project identified key livestock health policy issues through review of literature and interaction with livestock market players, community groups and key decision makers in Turkana’s livestock industry. Timing of livestock vaccination and treatment programs, access to veterinary drugs, compensations for Index Based Livestock Insurance (ILBI) and the role of the community disease reporters (CAHWs) as some of the most contentious issues regarding implementation of animal health and disease control programs in the county. The emerging policy interventions are the One-health concept, livestock identification and traceability, and the evolving role of community based animal health providers. These issues greatly affect the delivery and sustainability of the Turkana County livestock industry like other ASAL counties in the country.

1. Background
Government/ public extension including veterinary service has for a long time being inadequate in the Turkana County as it is the case in many Arid and Semi-Arid areas of Kenya. Due to inadequate public animal health services in ASAL/pastoral areas, various private service delivery initiatives, including community-based animal health service delivery systems are facilitated by NGOs. Even with a combination of private and public extension providers, extension delivery in the pastoral areas is still challenging because of conditions such as insecurity, poor infrastructure, low cash economy, high cost of service delivery, vastness of the areas, and lack of veterinary personnel among others. The movement of livestock in search of pasture, water, markets and occasionally away from livestock raids, increase spread of disease vectors in pastoral areas such as Turkana County.

Centre for African Bio-entrepreneurship (CABE) with funding from the Open Society Initiative for East Africa (OSIEA) and local partners in the Turkana livestock industry, have been working to enhance the capacity of pastoral communities to influence decision making with respect to animal health, markets and policy for improved livelihoods and food security in the region. The process has stimulated interesting debates across the county including evolving trends of disease control, review of existing livestock policy frameworks and the role of various stakeholders in the livestock value-chain.
A key aspect of ReSAHMaP project involved documenting existing innovations in disease surveillance and management to facilitate learning, and to inform policy and practice. As a result, the following findings are discernible: First, according to the director of veterinary services in Turkana County, there are emerging complex livestock diseases (viz. ECF, East Cost Fever; FMD, Foot and Mouth Disease; RVF, Rift Valley Fever) which did not exist in the county a decade ago. Other common livestock diseases in Turkana and the larger northern frontier region which are of serious economic importance include Contagious bovine pleuro-pneumonia (CBPP), Contagious Caprine Pleuroneumonia (CCPP), ORF (scabby mouth), Lumpy Skin Disease (LSD), Anthrax, FMD, Peste Des Petits Ruminants (PPR), mange (camels) and scour (diarrhoeas), and a variety of tick borne diseases. For instance, PPR disease, mainly affecting sheep and goats, claimed between 400,000 to 1.2 million and infected another 3.6 million sheep and goats between 2006 and 2009 in Northern Kenya (USAID, 2009).

Second, the recurrent nature of these diseases has resulted into increased intervention of the private sector players and use of veterinary pharmaceuticals. In the larger Turkana region, pastoralists themselves have been involved in dispensing and treatment of livestock. This is because the Community animal health Workers (CAHWs) and veterinary personnel are not adequate to cover the county. Third, many pastoralists are able to link diseases to certain vet drugs. For instance, oxytetracycline injection (10-20%) is mostly demanded by pastoralists to treat diseases perceived to be of tickborn. Most pastoralists and community disease reporters (CDRs) tend to classify diseases using local dialect. According to the veterinary professionals working in the county such practices could worsen antimicrobial and acaricide resistance further leading to massive livestock deaths.

Fourth, during consultative meetings in Turkana South and East Sub Counties, it emerged that inadequate coordination of livestock movement, quarantines and vaccination campaigns by the state department of Agriculture (veterinary services) is also a contributing factor to persistence of livestock diseases. The recurrent and increasing trends of livestock epizootics and emerging disease patterns can also be linked to the effects of climate change in the county.

Fifth and finally, according to the county directorate of veterinary services, disease outbreak in the county is mainly triggered by natural disasters. For instance, the recurrent droughts exacerbate the scarcity of pasture and water. When this is followed by heavy rains, like it happened in the El nino of 2015, the following emergence of green succulent pastures leads to deaths of small stock as has been witnessed in several parts of the county. On the other hand, the patterns of occurrence of RVF in the county seem to have been influced by El nino rains. This disease is known to affect both animals and human. This policy brief focuses on new approaches in disease control and management; and also reviews the role of various stakeholders in the livestock value-chain in Turkana County.

2. New approaches in integrated livestock disease control

Emergence of the One-health concept
Recent studies conducted in ASALs have shown that several disease epidemics occurring in this region point to a repetitive trend that is consistent with particular environmental/climate trends. An optimal human and livestock health is one of the essential considerations for sustainable economic development in ASAL counties such as Turkana. The “One Health Approach” is based on the realization that diseases that adversely impact the health of humans, animals and the environment can be successfully addressed through collaboration across disciplines and institutions. The one health concept has demonstrated that human, livestock and the environment are closely interconnected. The concept was recently institutionalized through the Zoonotic Disease Unit (ZDU), which enhances collaboration among the Ministry of Agriculture, Livestock, Fisheries and the Ministry of Health. The Kenya ZDU was established in 2011 and was charged with the responsibility of setting up and maintaining active collaboration at the interface of animal, human, and ecosystem for better prevention and control of zoonotic diseases.

The devolved structures of the unit is undergoing establishment in various counties through active advocacy and sensitization. The disjointed approach in addressing One-health components is one of the reasons why the emergency disease responses are less effective especially in the ASALs. This situation is more evident in instances of zoonotic diseases (diseases shared between animals and
humans). When disease outbreak occurs, the concerned line ministries and development partners often respond to such outbreaks in isolation (i.e., without the concerted efforts of other associated One-health components). Approaches designed for addressing such challenges should be focused on ensuring that diseases, disease-causing and carrying agents are not transmitted between livestock, people and the environment. This in turn requires a paradigm shift towards an integrated approach in livestock and human disease management as opposed to the traditional approach of handling incidences in isolation.

Regional Approach to disease control, livestock identification and traceability

A functional livestock identification and traceability systems holds the key to both national security and bio-security. The Turkana County like other neighbouring counties have been victims of cattle rustling and uncoordinated livestock movement between Kenya and its neighbours.

The directorate of veterinary services has prescribed hot iron branding as the primary means of livestock identification and traceability. Ear notching is also a widespread practice and is generally appreciated by many pastoralist communities especially for the small stock. Each county in Kenya has subsequently been awarded a particular unique identification code to denote animals from a given region. But these traditional practices have not been effective in livestock identification and traceability.

Recent trials by the national government have demonstrated that the emerging technologies in livestock traceability hold the key to effective control of livestock moment as well as disease control (see Box 1). Policy frameworks that strongly advocate for and make mandatory adoption of such technological innovations in prone pastoral areas need to be considered for not only curtailing cattle rustling menace but also strengthening importer confidence on the local livestock products because of their traceability.

Strengthening the capacity of the Community Animal Health Workers (CAHWs)

A recent study by USAID and Turfts University (Abebe, 2014) in Turkana County reveals that CAHWs have had a positive impact on the management of diseases in the county. These include: enomokere (anthrax in cattle), lokipi (tryps), emadang (camel tick infestation), emitina (mange in camels) and loukol (CCPP in sheep), among other diseases.

The CAHWs approach in Kenya has evolved since the early 1980s and more specifically in Turkana County. In the last decade, a number of NGOs have supported training of the CAHWs (also commonly referred to as ‘community disease reporters’) in Turkana on basics of animal health. An assessment of some of the recent efforts by development partners in the county (including SNV, World Vision and VSF Belgium) shows that substantial achievements have been made. But several challenges still persist including: CAHWs’ engagement in other activities, lack of refresher courses, withdrawal of support by development partners and unsupportive legal and operational framework. The enactment of the VSVP Act 2011 has also limited formerly prescribed functions of CAHWs (viz. specific disease diagnosis and treatment and surgical procedures), which according to the ACT are reserved for registered veterinary surgeons by the Kenya Veterinary Board (KVB). This has resulted into negative impact on disease control and trade in Turkana.

Box 1: Traceability Rumen Boluses Radio Frequency Identification Devices (RFID)

Rumen Bolus contains a microchip which is encased in a hard ceramic casing. It is usually inserted into rumen of an animal using a blousing gun. The bolus is only removed from the rumen at slaughter. In order to curb the cost of using microchips, the manufacturers will often propose that the bolus be re-used.

Photo credit (Nation media group) Traceability and Tracking
The latest intervention by the government, through the Kenya Veterinary Board (KVB), is a strategy for veterinary service delivery in the ASALs of Kenya to ensure transition from CAHWS to KVB. Despite these efforts by the KVB and partners, there is little acceptance of private animal health providers in Turkana mainly due to the expectation that the government will provide these services to pastoralists at either subsidized rates or for free. There is no doubt that the CAHWS are an indispensable human capital for the development and revitalization of livestock value chain in Turkana County.

3. **Key policy recommendations**

**Issues for implementation by the county Government**

- Implement an integrated control of livestock movement and synchronised reinforcement of quarantines on disease control and management.
- Strengthen integration of indigenous Knowledge (IK) systems into livestock health and nutrition systems including ethno-veterinary of nutrient-rich plant materials for livestock production.

- Operationalize the One-health concept at the county level by establishing a platform for interaction of key one-health players and decision makers (including livestock, human health and environment sectors) to ensure synergy and efficiency in response to disease incidences.

- **Issues for policy for focus by the National Government**

  Develop and implement a central training curricular under the guidance of the VSVP Act 2011 to strengthen the incorporation of the Community Animal Health Workers (CAHWS) in disease control and Herd Health Management (HHM) in Kenya. Because well-trained CAHWS can boost the currently understaffed livestock health provision sector in the ASALs.

  Provide incentives for the Kenya Veterinary Board (KVB) and other development partners to support adult learning techniques that focus on improving the capacity of disease reporters on diagnosis, responsible use of selected veterinary pharmaceuticals and disease reporting.

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**Bibliography**


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