REGIONAL PASTORAL LIVELIHOODS RESILIENCE PROJECT (RPLRP)

THE ROLES OF PUBLIC AND PRIVATE SECTORS IN THE SUPPLY AND PROVISION OF ANIMAL HEALTH SERVICES IN THE IGAD REGION: REVIEW OF POLICY AND REGIONAL FRAMEWORK

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IGAD CENTRE FOR PASTORAL AREAS AND LIVESTOCK DEVELOPMENT (ICPALD)

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IGAD REGIONS

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ACRONYMS

ASAL	Arid and Semi-Arid Lands
AU-IBAR	African-Union Inter-African Bureau for Animal Resources
CAADP	Comprehensive African Agriculture Development Programmes
CAHW	Community Animal Health Worker
CPD	Continuous Professional Development
CVO	Chief Veterinary Officer
EAC	East African Community
EIAR	Ethiopia Institute of Agricultural Research
EU	European Union
EVA	Ethiopia Veterinary Association
FAO	Food and Agriculture Organization
FMD	Foot and Mouth Disease
GMO	Genetically Modified Organisms
IGAD	Inter-Governmental Authority on Development
HACCP	Hazard Analysis and Critical Control Point
KALRO	Kenya Agriculture and Livestock Research Organization
KEVEVAPI	Kenya Veterinary Vaccine Production Institute
K-LIFT	Kenya Livestock Trust Fund
KVAPS	Kenya Veterinary Association Privatization Scheme
LEGS	Livestock Emergency Guidelines and Standards
LITS	Livestock Identification and Traceability System
MoU	Memorandum of Understanding
NARO	National Agricultural Research Organization (Uganda)
NGO	Non-Governmental Organization
NPS	National Disease Prevention System
NVI	National Veterinary Institute (Ethiopia)
OIE	World Organization for Animal Health
PPP	Public-Private Partnership
PPR	Peste des Petits Ruminants
PVS	Performance of Veterinary Services (OIE)
RPLRP	Regional Pastoral Livelihoods Resilience Project
SAPs	Structural Adjustment Programmes
SDGs	Sustainable Development Goals (UN)
SPS	Sanitary and Phyto-Sanitary (Agreement) -WTO
TADs	Transboundary Animal Diseases
ToR	Terms of Reference
UN	United Nations
VLU	Veterinary Livestock Units
WTO	World Trade Organization

EXECUTIVE SUMMARY

The review of policy on the roles of public and private sectors in supply and provision of animal health services aims at informing IGAD of the necessary interventions to alleviate constraints affecting animal health service delivery, particularly in the control of Transboundary Animal Diseases (TADs). Specific objectives include:

- Identification of key public and private sector players in animal health service delivery;
- Identification of weaknesses, strengths of the various public and private sector players, and opportunities for improving service delivery;
- To highlight lessons learnt on the roles of public and private sectors in supply of animal health services;
- Identification of policy gaps including resource gap (resource allocations against the requirements for compliance with OIE 'Evaluation of Performance of Veterinary Services');
- Make recommendations in line with policy gaps identified;
- Development of a Regional framework on the roles of public and private sectors in the supply of animal health services.

The review takes into account that IGAD is a regional economic community (REC), focused more on harmonized interventions within the region rather than specific in-country interventions.
The review methodology comprised of analysis of livestock policies and other relevant documents; country visits covering Ethiopia, Kenya and Uganda to collect information using questionnaires as a guide; information gathering through interviews of key informants; A questionnaire for Chief Veterinary Officers of the countries not visited (Somalia, Djibouti, South Sudan and Sudan); Analysis of information gathered, and a validation workshop. Apart from Kenya, country visits were confined within capital cities (Entebbe and Kampala in Uganda, and Addis Ababa and Debre Zeit in Ethiopia).

The Animal Health Service Delivery in all the countries of IGAD region has been affected by the Structural Adjustment Programmes (SAPs) of the late 1980s and early 1990s in one way or another. Though not to the same extent, there was a policy shift from Government dominated service delivery to liberalization and privatization of services including supply of inputs. Animal health services were categorized as either public goods (under government responsibility) or private goods (private sector services) primarily based on the economic theory of rivalry (the extent to which service provision to an individual prevents others from getting the same service – low and high rivalry) and exclusivity (the extent to which the benefits of a service are confined to the individual who is receiving and paying for the service – low and high exclusivity). Services with low rivalry and exclusivity are public goods while those with high rivalry and exclusivity are regarded as private goods.

Examples of Public good services include animal disease surveillance and monitoring, prevention and control of diseases of economic and public health importance, animal livestock movement control, laboratory diagnostic and disease investigation services, quarantines, inspection and certification of animals and animal products for both local and export market, training, regulation of importation of animals and animal products including semen, regulation /quality control of veterinary drugs, animal health research and extension, control of tsetse, legislation and policy, and development of strategies. On the other hand, private good services include clinical services (diagnosis and treatment), artificial insemination services, production and distribution of veterinary drugs and vaccines, herd health management, control of endemic diseases, marketing of livestock and livestock products, control of ticks, and veterinary supplies (supply and distribution of inputs).

There are however some services, such as extension, that can be provided more efficiently and effectively when shared between public and private sectors. Equally there are private good services that require heavy capital investment beyond the immediate ability of the private sector-e.g. semen and vaccine production, thus necessitating the intervention of the government while preparing and nurturing the private sector to grow. This is the case in Kenya, Uganda, Ethiopia, Sudan and Djibouti.

Public sector players comprise of Government Ministries and Directorates, training institutions (e.g. Veterinary schools), Regulatory bodies such as Veterinary Statutory and Dairy Boards, National Research Institutes or Organizations, National Laboratories, and Animal Genetics Resource Centres among others.

The main private sector players include veterinary pharmaceutical companies, private Veterinary practices (professionals and paraprofessionals), community animal health workers in ASAL areas, farmers' organizations and unions (commodity-based associations: dairy cooperative societies, pastoral associations, breeders associations, producer associations etc), professional and paraprofessional associations, networks, private training institutions, and drugs supply outlets (agro-vets, veterinary shops, and pharmacies). Besides public and private sector players, there are many Non-Governmental Organizations (NGOs) involved in the livestock sector in all of the IGAD Countries. They are involved in various activities including the facilitation of government personnel in disease control activities, training and extension, community-based livestock breeding programmes, emergency responses, and water provision.

Main weaknesses in the public sector include inadequate resources to execute their mandate; limited capacity to implement policies and to enforce regulations; lack of technical expertise in some cases; poor support towards the private sector; inadequate capacity to design, coordinate and implement cross border disease control and surveillance programmes; inadequate database and information management systems; and poor institutional linkages among others. Their main strengths are: well established operational structures, well supported legally and administratively (legal and administrative instruments), public recognition, and countrywide network and structures

The Private Sector's main weaknesses are: Over-driven by profits and quite often at the expense of non-compliance with regulations, limited capacity to deliver, involved only in economically viable activities, low capacity to effectively participate in control of TADs, weak private-public partnership, not well linked to public sector, not well conversant with policies and regulations, unfair competition from uncontrolled illegal/unqualified operators or quacks, lack of effective networks or platforms for sharing information and experiences, inadequate business management skill, lack of training opportunities to improve skills and knowledge, and limited advocacy and lobby capacity. Main strengths: the private sector is perceived to be more efficient and responsive, results oriented, business oriented and client focused.

The opportunities for both public and private sectors to improve service delivery include: a devolved system of government with possibilities of better resource allocations and expansion of services; the enormous demand for services in the region; growing regional population with concomitant demand for animal products; international standards and requirements for trade in livestock and livestock products provide an opportunity to improve regional animal health, welfare and food safety standards; the availability of markets for livestock and livestock products within and outside the region; the presence of relevant continental and international institutions in the region for collaboration and technical assistance –IGAD/ICPALD, AU-IBAR, ILRI, OIE, FAO etc., the endorsement of privatization policy in all the countries (no back tracking on privatization), and infrastructural developments taking place in many ASAL areas (road network, power connectivity etc).

The policy shift from government dominated animal health service delivery to privatization, rationalization and liberalization pathways has brought both positive and negative impacts. Positive impacts include the availability of professional animal health services closer to the community in some areas, mainly dairy farming areas; the creation of employment opportunities for veterinary professionals and paraprofessionals through private veterinary practices including the provision of artificial insemination services; wider availability of veterinary inputs such as veterinary drugs through agro-vets and veterinary drug shops; and development of a culture of paying for services. Negative impacts include the: non-availability of professional animal health services in ASAL areas as they are not attractive to private service providers; private veterinary practices focused more on clinical work and other profitable services and minimal focus on the control of TADs; the collapse of some 'community-based services' such as tick control; the proliferation of illegal operators in animal health service delivery (quacks); weak regulatory frameworks (weak regulation of veterinary profession and veterinary drugs); and fake inputs (drugs) on the market.

Lessons learnt;

- It is important to ensure adequate preparedness of the private sector and target beneficiaries, their full involvement and participation before government exits the service delivery – smooth transition in handing over services from government to private sector is of critical importance;
- Private sector support and promotion plays a key role for the success of animal health privatization policy. A weak private sector cannot deliver effectively and efficiently;
- Well-designed public-private partnership programmes in disease control are considerably more efficient and effective –e.g. contracting some public good services to private sector (sanitary mandate or animal health delegation) has proven more effective and efficient;
- Lack of clear policy guidelines has consequences, some which can be costly and counterproductive – e.g. lack of clear policy and legal recognition of CAHWs as in the case of Kenya made them work as illegal underground service providers (no official supervision or monitoring), with veterinary regulators and authorities turning a blind eye – a worse situation than it would have been had there been formal or legal recognition, monitoring and supervision of CAHWs.

The main policy gaps identified are: inadequate harmonization of animal health policies; insufficient harmonization of sanitary standards and training standards in the region; inadequate coordination and harmonization of cross border disease control and surveillance activities; weak support for private sector; low priority given to livestock sector and inadequate resource allocations; lack of clear policy and legal support for public-private partnership; inadequate database and information management systems; lack of clear policy guidelines on, and weak coordination of, livestock-related emergencies; inadequate disease diagnostic, control and surveillance infrastructure including laboratories and quarantine facilities; insufficient buy-in and lack of legislation support for animal registration, identification and traceability system; inadequate promotion and adoption of 'one health concept' in the region; inadequate promotion and adoption of risk-based approach to disease control and food safety in the region; insufficient policy guidelines on veterinary governance in the region; weak implementation and enforcement of policies and regulations; poorly regulated animal welfare including lack of regional policy framework; and poor control of veterinary drugs among others.

Recommendations have been made in line with the gaps identified and include:

- harmonization of animal health policies and livestock trade requirements in the IGAD region;
- harmonization of veterinary training curriculum and promotion of continuing professional development in the region;
- better support for the empowerment of private sector (e.g. affordable credit facility, capacity building, information provision etc);
- strengthening of policy and legislation in certain areas including animal welfare, animal feeds, veterinary drugs registration and control, etc; promotion of risk-based approaches to disease control and food safety standards; promotion of 'one health concept' in the region;
- support for the Member States to develop livestock master plans to facilitate and attract investments in the sector;
- support for harmonization and coordination of cross border disease control, prevention and surveillance activities;
- support for the improvement of disease control and surveillance infrastructure / facilities;
- development of communication strategy to enhance institutional linkages, collaboration and sharing of information;
- development of capacity and appropriate strategies for better implementation and enforcement of policies and regulations;
- promotion and support for innovative research and service delivery models;
- and support for establishment of adequate database and information management systems among others.

A regional framework is being presented as part of the review and is primarily based on identified policy gaps, focusing on both public and private sector roles in the supply and provision of animal health services. The framework highlights various roles for both public and private actors, gaps and recommended actions.

Critical pillars of the framework include harmonization of animal health related policies, implementation of policies and enforcement of regulations, control of TADs, Livestock Identification and Traceability system, animal health research, support to the private sector, public-private partnership, control of veterinary drugs and the veterinary profession, database and information management, veterinary education and extension service delivery, regulation of animal feeds, policy advocacy, and innovativeness in animal health service delivery.

01. INTRODUCTION AND BACKGROUND INFORMATION

The IGAD Regional Pastoral Livelihoods Resilience Project (RPLRP), with the financial support from the World Bank, is being implemented in three IGAD Member states namely, Kenya, Uganda and Ethiopia. The project objectives include enhancing livelihood resilience of pastoral and agro-pastoral communities in cross-border drought prone areas of selected countries and improve their capacity to respond appropriately to shocks or emergencies. Among other key areas, the project focuses on harmonization of regional policies, scaling up good practices across member countries and facilitating discussions on issues related to cross border activities.

Assignment and its objectives

As elaborated in the Terms of Reference- ToRs, this assignment is to 'Review Policy on the Roles of Private and Public Sector in Supply and Provision of Animal Health Services in IGAD Region and develop a Regional Framework'. The output of this review will inform IGAD of the necessary interventions to alleviate constraints affecting animal health service delivery, particularly in the control of Transboundary Animal Diseases (TADs).

Specific objectives include:

1) Identification of key public and private sector players in animal health service delivery;
2) Identification of weaknesses, strengths of the various public and private sector players, and opportunities for improving service delivery;
3) To highlight lessons learnt on the roles of public and private sectors in supply of animal health services;
4) Identification of policy gaps including resource gap (resource allocations against the requirements for compliance with OIE 'Evaluation of performance of Veterinary Services');
5) Make recommendations in line with policy gaps identified;
6) Develop Regional framework on the roles of public and private sectors in supply of animal health services;

The review takes into account that IGAD is a regional economic community, focused more on harmonized interventions within the region rather than specific in-country interventions.

Review justification

The IGAD Region is endowed with enormous animal resource but productivity and market access are constrained by various factors. Livestock diseases and especially the TADs are among the main constraining factors contributing to mortality, low production and productivity, high cost of treatment and prevention, and lack of accessibility to lucrative international livestock markets. Public and private sectors as well as Non-Governmental Organizations and livestock owners have crucial roles to play in disease control and animal health service delivery in general. These players need enabling policy and legal environment for effectiveness and efficiency in their respective roles. The review of policy on the roles of public and private sectors in supply and provision of animal health services is not only relevant but of critical importance in the region.

Further, the review draws its legitimacy from the Regional Policy Framework on Animal Health in the Context of Trade and Vulnerability of the Member States of the Intergovernmental Authority on Development (IGAD). In particular, article 3,2: c) of the policy framework stipulates:

'Accordingly, in order to enhance the regional capacity to assist national compliance with international standards, Member States agree to: (c) develop a regional framework to define, enhance and enable the respective roles of private and public-sector actors in the supply of animal health and related services, encourage collaboration where appropriate'. The review is therefore part of the implementation of the regional animal health policy framework

02.REVIEW METHODOLOGY

Review methodology comprised of:

- Review of documents and other relevant materials. These were sourced from various organizations and institutions as well as from internet.

- In- country visits to collect information covered Ethiopia, Kenya and Uganda. These are the countries participating in the IGAD Regional Pastoral Livelihoods Resilience Project, hence their choice for the stated purpose. Apart from Kenya, Country visits were however confined within capital cities (Entebbe and Kampala in Uganda, and Addis Ababa and Debre Zeit in Ethiopia).

- Interviews were conducted using questionnaires as a guide, either in groups (focus group discussions) or with individuals (key informants).

- Public sector players consulted and interviewed included Government departments/directorates responsible for animal health services, public Veterinary Training Colleges, National Research Institutes, National Animal Genetic Resource Centres, Regulatory Bodies, and Vaccine Production Institutes;

- Private sector players interviewed were Pharmaceutical Companies, Agro-Vets and Veterinary drug shops, Professional and Paraprofessional Associations, Private Veterinarians and paraprofessionals, a private training institution, and livestock farmers' organizations.

- Other stakeholders consulted included Non-Governmental Organizations, regional and international organizations (AU-IBAR, FAO, and OIE).

- A total of 101 persons were interviewed (Kenya – 66; Uganda – 17 and Ethiopia – 18)

- A questionnaire was also sent to Chief Veterinary Officers of Somalia, Djibouti, South Sudan and Sudan.

- Data cleaning and analysis of information collected;

- Validation workshop, with participants drawn from IGAD Member States was conducted with the aim of enriching and validating the review findings; incorporation of validation workshop input into the review report.

Limitation of the methodology: There was a delay in returning questionnaires; the questionnaire to Chief Veterinary Officers had to be modified to make it shorter and easier to respond to (mostly yes or no answers)

03. GUIDING PRINCIPLE

The guiding principle in this review is tethered around two questions:

3.1 What do we (animal owners and other stakeholders) want from the animal?

- Secure animal health, welfare and productivity: –The focus here is securing animal health and welfare, ensuring that the animal receives high quality veterinary care and respect for animal rights on a sustainable basis. A well cared for animal, free of diseases and other stresses, is good for putting more value to improve production and productivity.
- Social-economic development: - animal health is a trade related profession, hence the need to view the animal from a commercial perspective. This implies that securing good animal health and welfare is not enough. Thus, there is need to put more value into the animal (through good nutrition, breeding etc) to make it an asset of good value to the owner and other stakeholders such as a high value animal for food security and social-economic development.

3.2 What is it that we do not want from the animal?

Bio-threats or risks from animals to humans: preventing any biological, chemical or physical hazards from animals to humans. Prevention and control of zoonotic diseases, chemical residues (e.g. veterinary drug residues) and contaminants from crossing over from animals to humans provides sound basis for ensuring that human health is well protected from bio-threats from animals.

The aim is therefore to get a public-private framework that gives the best results in terms of what we want and what we do not want from the animal as highlighted above. Both public and private sectors are major players in supply and provision of animal health services, and in all cases a genuine partnership anchored on mutual trust, transparency and accountability is the preferred pathway to achieving high standard in the delivery of animal health services. It is however acknowledged that the roles of public and private sectors in delivery of animal health services may differ from one country to another at any given time depending on prevailing circumstances in each country.

04.BENCHMARKS

World Animal Health Organization (OIE) Guidelines

The policy on roles of public and private sectors in animal health service delivery should aim at enabling the IGAD Regional Member States to achieve performance standards as stipulated under OIE Standards (Terrestrial Animal Health Code), particularly with regard to 'Evaluation of Performance of Veterinary Services' (Chapter 3.2). Although OIE does not provide animal health /welfare guidelines on the basis of private or public services, it nevertheless sets out performance standards that are acceptable globally and upon which National or Regional Veterinary Services can benchmark their policies and standards.

Evaluation of performance of veterinary services using OIE PVS tool enables the countries to gauge their level of performance against the OIE Standards. The emphasis is on the demonstration the veterinary services have the capability (human resources, physical resources, financial resources, strategies and activities) for effective control of the sanitary and zoosanitary status of animals and animal products. The key elements of capability include the adequacy of resources, management capability, legislative and administrative structures, veterinary authorities' independence in the exercise of official functions, and history of performance, including disease reporting. It is therefore expected that the roles and responsibilities of all the players in the supply and provision of animal health services, whether public or private, should optimally contribute the required capability.

A summary of competencies that make up the required capability is given in figure 1 below:

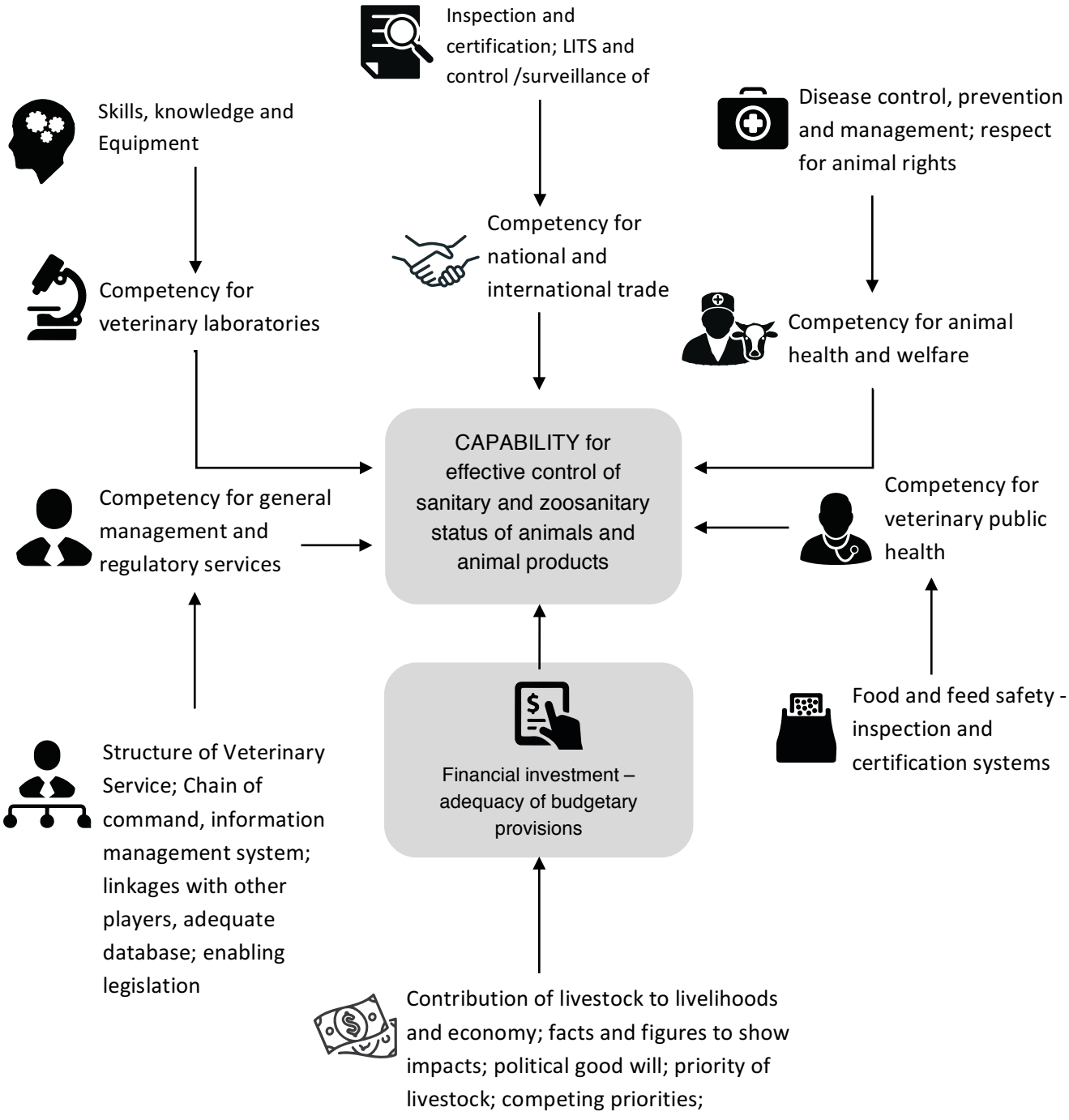


Figure 1: Summary of Competencies Required for Effective Animal Health Service Delivery

Other important capability elements include competency in border inspection, risk analysis and veterinary communication.

United Nations Sustainable Development Goals (SDGs)

While reviewing the policy on the roles of public and private sectors in animal health service delivery in the IGAD Region, due consideration of the UN SDGs is essential. There are 17 SDGs but eight of them are more relevant to animal health services. These are:

Sustainable development goals 1 & 2 - elimination of poverty and hunger: livestock has the potential to contribute more towards elimination of poverty and hunger at household level, nationally, regionally and internationally. The guiding policies in animal health service delivery must therefore enable both public and private sectors to work harmoniously, effectively and efficiently so as to contribute to reduction/ elimination of poverty and hunger regionally and globally.

Sustainable development goal 3: Good health and wellbeing that ensures healthy lives and promote wellbeing for all at all ages. The policies must focus beyond securing animal health and welfare so as to ensure that animals have good value that contributes to human health and wellbeing. In this context adding value to the animal (through good nutrition) and prevention of bio-threats (Zoonotic diseases, residues, food contaminants) from animals to humans are of critical consideration in the policy framework.

Sustainable development goal 8: decent work and economic growth that promote sustained, inclusive and sustainable economic growth; full and productive employment and decent workforce for all. The main point here is to have a policy direction that promotes not only sustainable economic growth but more importantly a well facilitated work force with good provision of working facilities and tools and whose welfare is well safeguarded. The roles of both private and public sectors in animal health service delivery should be anchored on a policy framework that facilitates provision of adequate resources from the public and conducive working environment to attract private sector investment.

Sustainable development goal 9: innovation and infrastructure – build resilient infrastructure and promote sustainable industrialization: the livestock sector is endowed with a wide range of livestock species of great potential for industrialization, but with no lesser a dose of challenges including animal health related challenges. It provides opportunities for developing innovative ideas to address some of the challenges. The policy should thus aim at promoting a culture of innovativeness among the various players along the livestock value chains (meat value chain, milk value chain etc).

Sustainable development goal 12: responsible consumption and production - livestock production and consumption without causing adverse effects on either environment or human health, or compromising needs of future generation, is implied in this SDG – i.e. Economically viable, socially supportive and ecologically sound. While focusing on securing animal health / welfare and economic growth, the various players in animal health service delivery need to perform their roles with due consideration to environmental protection and promotion of human health. This is better highlighted by the quote below:

Sustainable development goal 15: protect, restore and promote sustainable use of terrestrial ecosystem, sustainably manage forests, combat desertification and halt and reverse land degradation and halt biodiversity.

Sustainable development goal 17: partnerships for the goals – strengthen the means of implementation and revitalize the global partnership for sustainable development.

'Ecology without economy is naïve; Economy without Ecology is irresponsible' (Paul W. Gilgen, 1998)

African Union (AU) policies and strategies

The relevant Institutions of AU, among others by AU-IBAR, should in tandem with continental policies and strategies spearhead the roles and responsibilities of both public and private sector. In particular, they should be geared towards contributing optimally to key AU-IBAR's strategic pillars (AU-IBAR Strategic plan, 2014 -2017), namely:

- Animal health, disease prevention and control: to strengthen veterinary governance and animal health systems for increased productivity, improved food and nutritional security, enhanced food safety and trade, and public health protection;
- Animal Resource production systems and ecosystems management: to strengthen animal resource production systems, improve management of animal resources and promote sustainable ecosystem management;
- Access to inputs, services and markets for animals and animal products: to facilitate increased access to inputs, services and markets for animals and animal products;
- Animal resources information and knowledge management: to improve creation, dissemination and utilization of knowledge for effective animal resource development,

Other key continental pillars taken into account in this review include the Livestock Development Strategy for Africa (LiDeSA), 2015 to 2035 (Department of Rural Economy and Agriculture, AU Commission) and Animal Welfare Strategy & Action Plan for Africa (it is in 1st draft). The strategic objectives underlined therein provide clear thematic areas upon which the policy review is underpinned. The LiDeSA Strategic objectives include:

- To attract public and private investments along the different livestock values chains
- To enhance animal health and increase production, productivity and resilience of livestock production systems
- To enhance innovation, generation and utilization of technologies, capacities and entrepreneurship skills of livestock value chain actors
- To enhance access to markets, services and value addition

Comprehensive African Agriculture Development Program (CAADP)

CAADP pillars provide some useful guide on which the regional policy on roles and responsibilities of both public and private sectors in supply and provision of animal health services should be anchored. They include:

- Improving rural infrastructure and trade related capacities for market access
- Increasing food supply, reducing hunger and improving responses to food emergencies crisis
- Improving agricultural research, dissemination and adoption

The IGAD Regional CAADP compact is already under implementation through various programmes including Regional Pastoral Livelihoods Resilience Project (RPLRP) covering Uganda, Ethiopia and Kenya.

IGAD Regional policy framework on animal health in the context of trade and vulnerability

The roles of the various players in animal health service delivery in IGAD Region, including both public and private sectors, should also be informed by the 'Regional Policy framework on animal health in the context of trade and vulnerability'. This policy framework sets the following regional priorities among others:

- Transboundary animal diseases, diseases of production, animal welfare and livestock related emergencies
- Regional and national capacity building and provisions of livestock services
- Inter-regional trade in livestock and livestock related products, inputs and services

Both public and private sector players have important roles to play in these priority areas.

05. DELIVERY OF ANIMAL HEALTH SERVICES: POLICY SHIFT

In the late 1980s and early 90s, many countries in the IGAD Region and beyond underwent Structural changes in Animal Health Service delivery system comprising of liberalization, privatization and globalization largely initiated under the Bretton Woods Institutions (World Bank and IMF) and commonly referred to as 'Structural Adjustment Programmes' (SAPs). In the midst of seemingly dwindling government resources, the animal health services that were hitherto in the domain of government could not be sustained through public expenditure, thus giving way to a policy change that advocated for exit or reduction of Government from non-core functions, and promotion of more involvement of the private sector in animal health service delivery (Hubl, Gathuma and Kajume, 1998).

The main thrust of the policy shift was to remove the burden of offering free or heavily subsidized animal health services from Government to the private sector. Veterinary services were traditionally the domain of the Government but the world economic recession of 1980s and the ensuing budgetary constraints, prevailed upon many governments to accept and implement the Structural Adjustment Programmes. The public financial constraints limited the availability and effectiveness of animal health service delivery (Holden, S. 1999)

Criteria for defining public and private roles in animal health service delivery

In countries where acceptance of Structural Adjustment Programmes was inevitable, including Kenya and Uganda, a process of categorizing animal health services into public goods, private goods and shared goods was undertaken followed by implementation that generated both negative and positive effects / impacts. The criteria for the categorization included:

i. Services whose benefits cannot be limited to individuals (of common benefits) were categorised as public goods. These include control of epidemic animal diseases, policy and regulatory functions, research, etc
ii. Services requiring heavy investments beyond the ability of private sector were also termed public goods, e.g. production of semen or vaccines (but with potential takeover by the private sector in the long run)
iii. Services whose benefits are highly limited to the individual consumers or Organization were placed under private goods. These include provision of clinical services, Artificial Insemination Services, sale of inputs, tick control etc.
iv. Services with both public and private goods characteristics these were placed in the category of mixed or shared goods, e.g. extension services

In 1997, a FAO supported world-wide conference on 'The Principles of Rational Animal Health Delivery Systems in the World, With Emphasis on Africa' defined essential components for rational delivery of veterinary services (table 1):

Table 1: Essential components for rational delivery of veterinary services (FAO)

Livestock producers and their organizations

i. A national public veterinary service
ii. A private veterinary sector
iii. A statutory regulatory body, and
iv. A veterinary professional association

Each component has different responsibilities and may represent different stakeholders. In broad terms, the five components can be collapsed into public (ii & iv) and private (i, iii, & v) sectors. The FAO Conference defined Public sector veterinary services using the following criteria:

i. Where no free-market incentive justifies (or creates demand for) a service, e.g. public health;
ii. Where there is free-market incentive but there are economies of scale, externalities, or professional or biological determinants which dictate how best to deliver specific services, e.g. disease eradication by area-wide vaccination;
iii. When services are provided based on the collective assent of the governed as to the need for specific services and how much the public is willing to pay (be taxed) for them, e.g. quality control of biological (vaccines).

Based on the above criteria, the conference grouped public and private sector responsibilities as reflected below:

Services under the responsibility of but not necessarily executed by the public sector:

- Assuring the health of national herd: Disease surveillance, Compliance monitoring, Quarantine, Quality control of remedies and vaccines, planning for emergencies, reporting to international bodies and neighbouring countries;
- Oversight of food safety, import and export inspection and certification according to international standards;
- Regulation, monitoring and support of other partners in the animal health care system;
- Accreditation of personnel, creation of an enabling environment for the private sector;
- Formulation of livestock development policy

Services under the responsibility of the private sector

- Clinical diagnosis and treatment,
- Production and distribution of remedies and vaccines,
- Artificial insemination,
- Management of herd health and production programmes,
- Marketing livestock and products, and
- Others.

Functions under shared responsibilities

- Disease diagnosis and reporting,
- Compulsory testing,
- Accreditation,
- Ticks and tsetse fly control,
- Food hygiene and inspection,
- Continuing professional education and training,
- Diagnostic support,

i. Animal welfare,
ii. Notifiable disease control,
iii. Disease emergency response,
iv. Zoonoses control,

- Excludability considers whether the provider or consumer of a service can prevent (or exclude) others from simultaneously benefiting from the service;
- Rivalry considers the extent to which the use or consumption of a good or service by one individual reduces the availability of this good or service to other people; high rivalry enables individual consumption whereas low rivalry permits joint consumption.

The services can therefore be classified on the basis of Rivalry and Excludability attributes: low excludability and low rivalry – public goods; high excludability and high rivalry – private goods;

Roles of public and private sectors can also be determined on the basis of economic concepts (S. Holden 1999) under the theory of excludability and rivalry:

Based on the economic theory, the public and private sectors roles are defined as shown below:
Private: clinical interventions and treatments; endemic disease control and prevention; sale of drugs and vaccines; some extension; some research; vaccine production; diagnostic services; veterinary clinics; dips management.

Services to be Sub-contracted to private sector organizations: meat inspection; drugs quality control; public goods extension; public goods research; control of epidemic diseases; zoonotic disease control.
Public: planning delivery of public good services; epidemic disease control; meat inspection and hygiene; drugs quality control (etc); legislation (design and enforcement); managing sub-contractors (including monitoring performance); information, certification and registration / de-registration.

The economic theory recognizes that performance of the private sector depends on government support especially in creating an enabling environment and smooth transition. Withdrawal of government from private good services without ensuring the presence of an enabled private (figure 2) is a prescription for a chaotic service delivery.

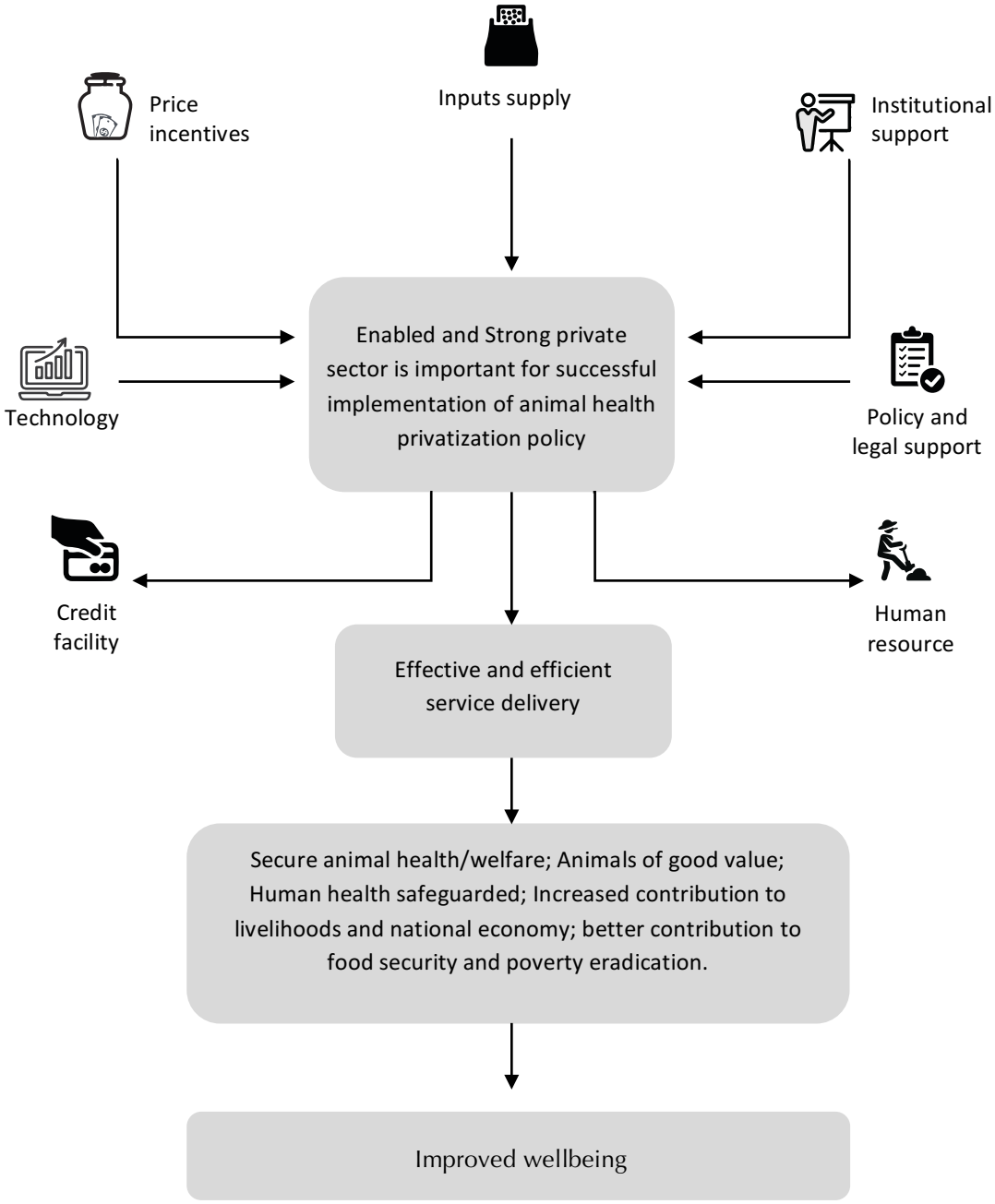


Figure 2: A flow chart of an enabled veterinary private sector

1n 2008 a background paper prepared for 'Livestock Sector Review' of the World Bank (Vinod Ahuja, M Rajasekhar & Ramalinga Raju 2008) showed appropriate delivery channels for animal health functions in India as shown in table 2 below:

Table 2: Suggested Sectoral Delivery Channels for Livestock Services

Animal Health Function	Appropriate delivery channel	
	Public	Private
Disease surveillance, prevention, control and eradication of:		
✓ Highly contagious diseases with serious socio-economic, trade and public health consequences;	✓	
✓ Diseases of low contagion	✓	✓
Quarantine and movement control	✓	
Emergency response	✓	
Veterinary inspection	✓	
Wildlife monitoring	✓	
Zoonoses control	✓	
Disease investigation and diagnosis	✓	✓
Drug / vaccine quality control	✓	
Production and distribution of drugs and vaccines		✓
Vaccination and vector control	✓	✓
Research, extension and training	✓	✓
Clinical diagnosis and treatment		✓
Food hygiene and inspection	✓	
Residue testing	✓	
Food safety tasks	✓	
Compliance monitoring	✓	

The review further indicated that public authorities can contract private agents, competent NGOs and other agencies to deliver selected public good services so long as transparency and accountability are ensured.

AU-IBAR: In 2012 AU-IBAR hosted a two-day Public Private Partnership workshop at the request of Ministers responsible for Animal Resources in Africa. The workshop was held in Naivasha, Kenya, and attended by delegates from Member States and other stakeholders. One of the outputs of the workshop was a situational analysis of the roles of public and private sectors in the delivery of livestock services including animal health services. The (table3) below (extracted from the workshop proceedings) illustrates the roles of public and private sectors within the diverse African context.

Table 3: Roles of the public and private sectors in livestock service delivery

Task	Overall responsibility	Implementation	Funding
Animal Health policy			
Design	Public sector	Public in consultation with private sector	Public
Planning	Public sector	Public in consultation with private sector	Public
Implementation	Public sector	Public sector, possible accreditation for specific tasks (quarantine, sanitary stamping out, rendering...)	Public
Enforcement/ Control	Public	Public sector, possible accreditation for specific tasks	
Policy and legislative framework	Public		Public/Private in association communities and other stakeholders
Disease control			
Control at borders	Public	Public and if possible private with accreditation	Private as much as possible
Quarantine (border and inland)	Public Sector Infrastructure Public and Partner e.g. build, operate and transfer systems e.g. in the horn of Africa (quarantine facilities)		〉 Public Sector (Infrastructure, inspection, Screening & Certification) /Private Sector: Maintenance of the stock 〉 Regulatory oversight – public 〉 Day – day management - Private
Surveillance of main contagious diseases	Public and private – initial report from farmer	All	〉 Oversight - public Public/Private-Preferably in subcontract with private operators; 〉 Farmers
Diseases data systems	Public/Private partnership		Public mainly
Production diseases	Private		Private

Parasitic disease control (dips, etc.) Vectors	Public / Private Mainly private, initial subsidy possible Public/ Private		Public (Epidemic proportions)/ Mainly Private
Animal Welfare	Public/Private		Public/Private
Veterinary drugs, vaccines			
Accreditation of drugs, quality control, destruction	Public	Public	Private
Production, importation	Private (except vaccines for notifiable diseases)	Private	Private
Retail sales	Private	Private	Private
Vaccine development	Public/Private partnership		〉 Public: Research and Development: 〉 Private: Production highly encouraged.
Vaccination	Public Sector /Private partnership		〉 Public Epidemic diseases; 〉 Mostly private sector.
Laboratory and diagnostic services			
Certification, Standards, quality assurance	Public	Private (under accreditation) or public	Private or public (the lab pays)
Diagnostic / tests	Shared (depends on diseases) Private for Feed and livestock products	Shared (Govt can own labs) Private for Feed and livestock products	Shared (depends on diseases) Private for Feed and livestock products

Task	Overall responsibility	Implementation	Funding
Provision of veterinary services			
Clinical veterinary services	Private Sector		Private
Compulsory Prophylaxes	Public	Public and if possible private with accreditation	Public
Inspection of food of animal origin and infrastructure	Public	Public and if possible private with accreditation	Private as much as possible
Food Safety and Zoonoses	Public and private		Public/ Private : subcontract
Animal Information Systems			
Animal Identification and Traceability	Public/Private		Public/Private
Disease data systems (Animal Resource Data and Information Systems)	Public Sector		Public/Private
Rangeland resources			
Design of legal framework	Public sector	Public sector in consultation with stakeholders	Public sector
Grazing and water management	Public and private		Public and private
Rangeland and water management	Public/ Private	Public (incl. local governments) and private sector	Public /Private in association with communities; organizations
Wildlife and livestock interface	Public and private		Public and private

Task	Overall responsibility	Implementation	Funding
Genetic resources			
Conservation	Public		Public sector and civil society/interest groups
Improvement of genetic resources	Private	Private	Private
Breeding services Financing	Private Public/Private		Private Public/Private
Research, education and extension			
Training	Public sector + Civil Society (board)	Private and public sector (accreditation by Governments)	Public and private
Continuous education	Private and public (control, harmonization)	Preferably private sector with participation of public	Public and private
Extension and advisory services	Public and private	• Public sector • Private sector when possible and sustainable.	Public and private
Animal resources research	Public and private	• Public sector • Private sector when possible and sustainable.	Public and private
Capacity building	Public and private		Public and private
Technology development and transfer	Public and private		Public and private
Knowledge and information systems	Public and private		Public and private
Research	Public and private	Public and private	Public and private

Task	Overall responsibility	Implementation	Funding
Marketing services			
Input provision (except vet drugs and genetic material)	Private	Private	Private (except emergency situations)
Marketing of livestock products	Private	Private	Private and public (common infrastructures)
Milk and meat processing	Mostly Private Sector		Mainly private; could be funded through a CESS on milk Regulation by Public Sector
Processing of livestock products	Private or local governments/communities (abattoirs)	Private	Private and public (abattoirs)
Feed supply services	Private Sector		Private/ Public Regulates
Livestock markets and infrastructure	Public and private		Public and private
Financial services			
Credit	Private	Private	Private – public can support risk (guarantee)
Insurance	Private	Private	Private – public can support risk (guarantee)

From the above case scenarios (FAO, Holden, Vinod and others, and AU-IBAR) it is quite evident that animal health privatization policy remains appropriate and feasible but often needs to be implemented within the frame of genuine public – private partnership to meet the expectations of stakeholders and society at large. Further, implementation strategy should take into account the specific context in a country or region, and more so the capacity of the private sector.

Requirements for effective privatization of animal health services

For effective implementation of the privatization policy, it was necessary to address some pertinent issues ((Hubl & others 1998) including:

i. Strict control of the distribution, handling and use of veterinary drugs;

- Establishment of Veterinary Drugs Inspectorates within establishments of Veterinary Authorities for monitoring purposes;
- Amendment of the law to allow full control of veterinary drugs by veterinary profession;
- Amendment of veterinary legislations to make them consistent with liberalization process;
- Development of code of ethics for veterinary professionals and para-professionals;
- Establishment or strengthening of Veterinary Statutory Boards to control the profession;
- Legal recognition of veterinary para-professionals;
- Smooth transition, ensuring lack of unfair competition and minimal conflicts between government and private sector;
- Empowering livestock farmers through improved knowledge and attitude, improved marketing and market access, in order to enable them pay for animal health services;
- Availability of Credit facilities for veterinary professionals and Para-professionals intending to go into private practice;
- Infrastructural development especially in ASAL areas – road network, communication, power supply etc;
- Provision of services by NGOs – linkages, monitoring and regulatory guidelines;
- To provide for services by farmers' organizations / user organizations – linkages, monitoring and regulatory guidelines;
- Promotion of private sector development in various activities, e.g. breeding and livestock multiplication, delivery of artificial insemination services, supply of animal health inputs etc.

Although the above requirements were identified with Kenya in mind, they were equally relevant to many other African Countries, and especially the IGAD Member States.

06.EFFECTS AND IMPACTS OF THE POLICY CHANGE

Positive impacts:

i. Employment opportunities – graduating veterinarians and veterinary para-professionals were able to get into private practice, thus becoming self-employed; private veterinary clinics, veterinary drugs shops and agro-vets are some of the employment opportunity avenues that can be largely attributed to animal health privatisation policy;

ii. Accessibility of services in certain area: In high rainfall areas, commonly referred to as high potential areas (mainly dairy areas), private veterinary services are closer and available to livestock farmers than before, and especially with improved communication through mobile phones;

iii. As a result of liberalization, drugs and other inputs are easily available to animal health service providers and farmers;

iv. Rescuing services from collapse: had the government continued to provide all the services as before, the services would have been thinly spread on the ground with very little impact, and due to lack of financial resources some services would inevitably collapse. The private sector came in to fill the service delivery gap that was eminent;

v. The policy shift provided the farmers' organizations an opportunity to provide some essential animal health related services and inputs to members (Kenya serves as an example) – some dairy cooperative societies and Unions employed animal health service providers to deliver artificial insemination and clinical services to members; in pastoral areas, Pastoral Associations (e.g. Wajir District Pastoral Association in Kenya) emerged in some areas, supplying veterinary inputs to members.

Negative impacts:

1) Commercialization and privatization of animal health services required supportive regulations and enforcement of the same to ensure protection of consumers. However, in many cases this was not put in place and consequently there was proliferation of illegal animal health service providers, offering low cost inferior quality service to livestock keepers, thus shielding the latter from quality services by professionals;

2) Veterinary drugs became easily available through formal and informal channels, creating opportunities for abuse and misuse. Veterinary drug residues in unacceptable levels are common in livestock derived products such as meat, milk and eggs. Similarly, microbial resistance to some drugs is an issue of concern to professionals and veterinary authorities. Infections caused by antimicrobial resistant pathogens contribute to increased veterinary expenditures because of additional and more expensive antimicrobial treatments, longer hospitalization, more visits, and more diagnostic tests – in additional to emotional and social effects on animal owners (Luca Guardabassi, John F. Prescott, 2015). Largely, this is attributed to misuse and abuse of veterinary drugs by illegal drugs handlers / users or quacks.

3) Inaccessibility of services in some areas, especially ASALs or hard to reach areas: the implementation of privatization policy did not consider different contexts and diversities. ASAL areas are a common feature in nearly all the IGAD Countries with unique characteristics including vastness, poor cash economy, poor road network, low literacy level, deep rooted cultural practices, high vulnerability to climate change phenomena, low commercially oriented livestock keeping, and insecurity in some areas among others. Under such circumstances, the cost of service delivery is relatively higher compared with high potential areas where conditions are more favourable to private animal health service operators. The unique conditions pertaining to

ASAL/ pastoral areas were recognized during structuring process and it was expected that some support was to be provided to the public service to enable it deliver services in those marginal areas where livestock keeping is not commercially oriented and economic viability of veterinary private practices is limited. This is better illustrated by the findings of a study in Zimbabwe (Odeyemi 1999) clearly indicating that 'under privatization, for any form of veterinary coverage for the non-commercially producers to occur, there must be one form of subsidy or the other'. The study further indicated that 'non-commercial producers have less access to animal health care services than their commercial counterparts'. The withdrawal of Government from services that were conceived to be private goods, at least in majority of the countries, left a huge gap; thus limiting accessibility of services by the livestock keepers.

Collapse of some 'public good' services: the implementation of privatization policy left a trail of collapsed services notably dipping and veterinary extension services in some countries. The handing over of dipping facilities and their management to unprepared beneficiaries (farmers) was not carried out in a progressive manner and little attention was given to capacity development of the beneficiaries to take over such a responsibility. The livestock extension service suffered a slightly different fate. The policy advocated for a demand-driven extension service but majority of the livestock keepers were not adequately empowered to demand for extension services and apparently the envisaged demand for services by the beneficiaries was ill conceived. Further, there were hardly any extension workers, whether government or private, in ASAL areas. The gap led to the establishment of community-based animal health service delivery system by NGOs through use of Community animal health workers.

07.LESSONS LEARNT

i. **Unpreparedness of target beneficiaries jeopardizes ownership and effective service delivery:**
Under the Structural Adjustment Programmes, some activities were handed over to beneficiaries without due consideration of their ability to take over such responsibilities. Dips and their management in particular were handed over to farmers who were expected to form management committees to manage dipping operations on a cost recovery basis. Dip committees were formed, given some elementary training and initial trounce of acaricide. Despite this initial support, the managerial capability of the dip committee members was very weak and could not match the responsibility. In effect, the beneficiaries were not adequately prepared and majority of the dips became non-functional and eventually collapsed. The well-intended tick control programme thus failed. This was witnessed in parts of Kenya and Uganda.
Lesson: it is important to ensure adequate preparedness of target beneficiaries, their full involvement and participation before government exits – smooth transition.

ii. **Support to and promotion of private sector is a key enabling factor for the success of privatization policy:**
Prior to structural adjustment programmes, the Government was the main player providing services either free of charge or at highly subsidized level. The animal health private sector was weak, and neither organized nor prepared to the reality of taking over some of the responsibilities from the Government. It was not going to be successful without support of the Government. In areas where the private sector was supported and promoted, the success was eminent. For instance, in Kenya and Uganda, credit privatization schemes were initiated with the support of Government, development partner and the respective Veterinary Professional Associations. The beneficiaries of the schemes were the Veterinary professionals who could access affordable credit (if they had collaterals) and start private veterinary practices. Through the privatization schemes, a substantial number of private veterinary practices have since been established especially in the provision of clinical services in dairy farming areas. Since then, the privatization scheme in Kenya, previously known as Kenya veterinary association privatization scheme (KVAPS), has been transformed into a broader credit facility namely, 'Kenya Livestock Trust Fund (K-LIFT)' and it is open not only to Veterinarians as was the case before but also to veterinary paraprofessionals and other entrepreneurs in the livestock sector.
Lesson: private sector support and promotion plays a key role for the success of animal health privatization policy.

iii. **Public –private partnership in disease control can improve effectiveness:**
Disease control through vaccination, and especially control of TADs, has traditionally been the role of Government. However, the governments' performance in this role has not been satisfactory, rarely achieving more than 50% vaccination coverage, unless through a donor supported project. In Ethiopia, a recent vaccination contractual arrangement scheme (2015) involving government and private sector (Veterinarians, Veterinary Assistants and CAHWs) was piloted:

- Private Veterinarians, Veterinary Assistants and CAHWs were identified and inducted appropriately. The Induction covered various aspects of the vaccination campaign including vaccination modalities, logistics and programmes; vaccination teams; coordination; roles and responsibilities of the various players; vaccination records; identification of vaccinated animals;

handling of vaccines; vaccine dosages; species of livestock involved; areas to be covered; expected targets; awareness creation; etc.

- Vaccination against PPR in 6 districts (ASAL areas)
- Government supplied the vaccine
- Ethiopian Veterinary Association covered other costs on behalf of government (with grant from EU)
- Target vaccination coverage - 3.5 million sheep and goats (figures from the 6 districts)
- Baseline survey showed 55% sero-conversion
- Target post vaccination sero-conversion was 80%
- Monitoring by EVA and Government officials including National Laboratory personnel)

Achievement: 4.23 million sheep and goats were vaccinated (the increase could be due either underestimated number of animals in the six districts or migrating animals from other districts in the course of vaccination); post vaccination sero-conversion of 92% was recorded, well above the target of 80%. The results indicated high level of efficiency and effectiveness in the vaccination campaign.
Lesson: well-designed public-private partnership programmes in disease control are efficient and effective. (Source: personal communication with EVA Chairman)

iv. Lack of clear policy can lead to conflicting actions, with negative consequences:

While Ethiopia is moving towards privatization of animal health services, the Government is at the same time providing services that are considered as private goods at a subsidized rate. Such services include clinical services and the provision of artificial insemination services. There have been some past initiatives to support privatization through a development partner but with the availability of free or subsidized veterinary drugs, the private initiatives become threatened. Distribution of free drugs without participation of private sector as it happens during droughts is detrimental to private sector initiatives in animal health service delivery and is a reflection of lack of clear policy guidelines.

Lesson: lack of clear policy guidelines has consequences, some which can be costly and counterproductive.

v. CAHW Service delivery system played a significant role in bridging service delivery gap despite limitations

Under the Structural adjustment programmes, Kenya Government withdrew from some critical animal health services including clinical services and at the same time stopped employing new veterinary graduates and veterinary paraprofessionals in the public service. The ensuing shortage of technical personnel was most felt in the ASAL areas as they were not attractive to private veterinary practices. Consequently, community animal health workers (CAHW) emerged in these marginal areas spearheaded and supported by NGOs. It was a stopgap measure to fill the vacuum. Veterinary Authorities and other stakeholders in Ethiopia, Sudan, South Sudan and Somalia embraced CAHW system, recognized it, nurtured it and developed its working modalities and guidelines including monitoring and supervision.

This policy direction for CAHW system was indeed in line with the recommendation of OIE Regional Commission for Africa on the effect of structural adjustment programmes on the delivery of Veterinary services in Africa – the 13th Conference of the OIE Regional Commission for Africa held in Dakar, Senegal, in January 1999 recommended that 'Community livestock workers also benefit from the setting up of an appropriate legislative framework, adequate continuing education and better integration into animal health networks'. The system was, and continues to be, useful in remote areas of the region, delivering basic animal health services and in vaccination campaigns – notably, successful vaccination against Rinderpest in, for example, Afar region of Ethiopia, in South Sudan and

in Somalia. On the other hand, Kenya deliberated over the system for a long time and subsequently condemned it but without giving any other viable option. The system continued to exist unrecognized (in most parts of the Kenyan ASAL areas with no monitoring or supervision, but quite often used by the local veterinary authorities during vaccination campaigns. Generally, it was visible to the community / livestock keepers but invisible to the Veterinary Regulatory authorities. It was more or less an 'underground animal health delivery system', operating without any official technical back up or supervision, but nevertheless made useful contribution in delivering basic animal health services to the community.

Lesson: CAHW delivery system has had positive impacts in the Countries where it was established despite loopholes, shortcomings and even lack of official recognition in some cases such as in Kenya.

Lessons from elsewhere:

Lessons from elsewhere in the African continent are almost similar to those from the IGAD Region. The FAO Study on the effect of SAPs on the delivery of veterinary services in Africa with particular reference to Mali, Cameroon, Chad and Ghana among others indicates that:

- The approach to privatization was top-down, with minimal participation of livestock producers and private animal health service providers. It was largely dominated by government veterinarians whose main interest was to promote or safeguard their privileges. Thus, privatization did not progress speedily as envisaged;
- Due to unclear definition of which services were to be privatized, it was generally construed by Finance Ministries to mean that government was left with minimal services to handle, hence minimal budgetary allocations to Chief Veterinary Officers. As a result, SAPs including rationalization of Veterinary staff portfolio left CVOs without resources and authority to manage and control diseases and other core functions;
- Inadequate buy-in of the reforms partly contributed to their failures: Half-hearted approach to SAPs, often regarded as donor-driven, meant that there was no good commitment to carrying out the reforms on the part of Government and on the other hand the private sector was not adequately prepared and equipped to take over the new responsibilities;
- Privatization has generally improved availability of veterinary services in urban, peri-urban and more intensive livestock producing areas whereas in remote rural areas the services have declined – the capacity of the government to provide services in these remote areas (equivalent to ASAL Areas) should have been considered as part of the reforms.

08.ANALYSIS OF VARIOUS PLAYERS IN ANIMAL HEALTH SERVICE DELIVERY

a. Public Sector Players: Weaknesses / Challenges, Strengths and opportunities

Public sector players in the IGAD Region (table 4) comprise of:

- Government veterinary Departments or Directorates bearing different labels in different countries but within the umbrella of Livestock / Animal resources and fisheries portfolio.

Table 4: Strengths, Weaknesses and Opportunities of the public sector in Animal health service delivery

Strengths	Weaknesses	Opportunities
• Well established institutions with operational systems, except Somalia and South Sudan due to chronic conflicts/insecurity • Mandate to control and prevent Transboundary Animal Diseases and supportive legislation exists; • Ability to solicit or attract support from development partners; • Focal point for OIE and main command centre for disease control in the country;	• Slow in decision making due to bureaucracy; not amenable to changes or new ideas; • Inadequate resource allocations, and therefore unable to control animal diseases to a satisfactory level – majority of CVOs indicated that current allocations cannot enable them meet more than 50% of their mandates (with reference to requirements of OIE Performance evaluation of Veterinary Services) • Inadequate capacity to generate adequate livestock related data for planning and advocacy purposes – scanty database and weak data/ information management systems; • inadequate evidence-based advocacy tools; • Inadequate infrastructures (labs, quarantine stations) for disease control and surveillance. Some Lab equipment is obsolete and	• Greater collaboration and partnership with private sector to improve service delivery; • Devolved system of government especially in Kenya – more resource allocations for livestock sector especially in regions that largely depend on livestock for livelihoods and household economy (ASAL Areas); it is also an opportunity to address technical personnel disparity

• Public sector has more opportunities for training and capacity building;	• poorly maintained (exception – Sudan); inadequate laboratory information management system; • Unequal distribution of technical personnel (huge disparity between ASAL areas and dairy farming areas) – Example: Mukono district in Uganda (dairy farming area) has around 30 Veterinarians while Kaabong district (hard to reach area /ASAL area) has only one Veterinarian; • Inadequate legal support in some cases, e.g. Livestock identification and traceability system can hardly be enforced without an appropriate legislation; • legal and policy support for public-private partnership is weak; • Decentralization of veterinary services (devolved system of government) – weakening disease reporting system and loss of coordination of the control of epidemic diseases, particularly in Uganda and Kenya; • Weak enforcement of laws and weak implementation of policies; • Low uptake of 'value chain approach' in risk analysis; • Conflicts in some parts of the region (Somalia and South Sudan) are a disenabling factor for disease control; • Inadequate policy guidelines and capacity for early detection and response to livestock related emergencies including disease outbreaks, drought and other emergencies affecting livestock;	• between ASAL areas and high potential / dairy farming areas; • Demand for quality livestock and livestock derived products regionally and beyond – opportunity for improved cross border collaboration in disease control and surveillance, as well as for harmonization of standards in the region • 'One health concept' – an opportunity to link animal health, human health and even environmental health for better control of Zoonotic diseases; Cross cutting programmes linking animal health, human health and environmental health are more discernible and likely to attract financial support from development partners;

- Statutory Regulatory Bodies (table 5) (e.g. Kenya Veterinary Board; Ethiopian Veterinary Drug, Animal Feed Administration and Control Authority; Uganda Veterinary Board; Dairy Boards)

Table 5: Strengths, Weaknesses, Challenges and Opportunities of the Statutory Regulatory Bodies in animal health service delivery

Strengths	Weakness / challenges	Opportunities
• Government supported financially; • Legal support –rooted in legislation, thus endowed with legal powers to execute their mandate; • Mandate to raise funds for their operations through approvals, licensing, registrations, annual subscriptions, penalties, etc.	• Low human capacity in majority of cases (knowledge and numbers), leading to inadequate enforcement of the regulations – resulting in disease spread, illegal practices through quacks, lack of respect for animal welfare, mishandling of vet drugs and negative consequences thereof, etc; • They have the mandate to check the quality and relevance of veterinary training but limited by inadequate capacity.	• Public demand for quality service delivery – opportunity to review regulations and for better enforcement; • Need to curb malpractices and non-ethical behaviour is a good opportunity for better collaboration with law enforcement agencies such as police and Judiciary.

Figure 3: **Cattle grazing by the roadside**

Illegal Roadside grazing as shown in figure 3 above – weak enforcement of the law

- National Research Organizations (e.g. National Agricultural Research Organization (NARO) of Uganda; Ethiopian Institute of Agricultural Research (EIAR); Kenya Agricultural and Livestock Research Organization (KALRO) – all under agricultural research portfolio. There is no national body purposely for livestock research and all of them have their strengths, weaknesses, Challenges and Opportunities as depicted tables 6-18.

Table 6 : Strengths, Weaknesses,Challenges and Opportunities of the National Research Organisations on delivering on their mandate

Strengths	Weaknesses / challenges	Opportunities
• Government supported; • Wide research mandate; • Support of development partners.	• Livestock research least prioritized compared with crops research – Example: of the 7 national research centres under NARO in Uganda, only one is for Livestock compared with 4 for crops; • Limited or low focus on livestock / animal health research activities; • Weak linkage and collaboration with government livestock departments, University Colleges of Veterinary Medicine and development agencies such as NGOs; • Minimal participation / involvement of the private sector; • Low uptake of research findings – due to inadequate dissemination strategies and lack of community-based forums for sharing research findings in some areas; • Social dimensions do not get due attention in livestock / animal health research.	• Camels, donkeys and emerging livestock like crocodiles, ostriches are becoming increasingly important in food security – opportunity for more research on diseases affecting them; • Enormous Livestock potential in ASAL areas – opportunity to carry out more research to unlock this potential; • 'One health concept' – an opportunity for more research on bio-threats from animals to humans; • Climate change phenomena / drought – opportunity for research on thermo-tolerant vaccines to solve the problem of frequent cold chain breakdowns. • Livestock farmers' organizations (e.g. pastoral associations, livestock traders' associations, dairy cooperative societies and Unions etc) offer appropriate avenues for dissemination of research findings; • Private sector and NGOs– well placed to provide research agenda based on vast experience in their operations;

- Training institutions – Universities and Tertiary Colleges involved in training of animal health service providers such as Veterinarians and Veterinary Assistants / Animal Health Assistants, as well as livestock production personnel.

Table 7: Strengths, Weaknesses, Challenges and Opportunities of the Teaching Institutions in Training Animal Health Services Providers

Strengths	Weaknesses / challenges	Opportunities
• Well established and reputed institutions of higher learning; • Good support from Government; • Adequate human capacity generally.	• Weak linkage with government livestock departments, national research institutions and development agencies such as NGOs • Minimal linkage with livestock keeping communities; • Inadequate linkage and consultation with key stakeholders such as wildlife service; • Conventional learning – no deliberate effort to promote innovation.	• Demand for improved livestock trade within the region and beyond calls for harmonized standards in the region including knowledge base, hence an opportunity to harmonize training curriculum among the regional institutions of higher learning and tertiary colleges involved in the training of animal health service providers; OIE guidelines could be used as the basis for harmonization; • Growing involvement of veterinarians in wildlife health and welfare is an opportunity for better integration of wildlife welfare, management and health into the veterinary training curriculum • Challenges along the livestock value chain, and especially so in pastoral areas, cannot be addressed effectively in a 'business as usual' manner. Here lies an opportunity for institutions of higher learning to promote innovation and be part of problem solving.

- Government owned Vaccine Production Institutes – e.g. National Veterinary Institute (NVI) of Ethiopia and Kenya Veterinary Vaccine Production Institute (KEVEVAPI)

Table 8: Strengths, Weaknesses, Challenges and Opportunities of the Government owned Vaccine Production Institutes

Strengths	Weaknesses /challenges	Opportunities
• Support by the government financially; • Generate own funds through sale of vaccines; • Sole institutions in the country producing vaccines (monopoly), and therefore heavily relied on for vaccines requirements – guaranteed internal market; • Quality control support by AU-IBAR Pan African Veterinary Vaccine Centre (PANVAC), Debre Zeit, Ethiopia	• Equipment not up to date with technologies found in developed countries; • Not able to retain highly skilled personnel due to unattractive or non- competitive remuneration; • Largely controlled by the government, with elements of inefficiency; • Lack of reliable national data to inform production – no clear policy on vaccinations, hence difficult to predict vaccine requirements (though communication with KEVEVAPI indicates that with devolution there is higher demand for vaccines, there is need for proper data to inform vaccine production).	• Control of transboundary animal diseases is gaining eminence in the region and likely to attract regional control programmes leading to increased demand for vaccines; • Devolved system of government – higher demand for vaccines by local government authorities who can procure directly from the vaccine producers; • Regional alignment to Global strategy for control and eradication of PPR – increased demand for the vaccine, hence an opportunity for the Vaccine production institutes to produce more and generate income.

- National Animal Genetic Resource Centres or equivalent – examples are found in Uganda, Kenya and Ethiopia.

Table 9: Strengths, Weaknesses, Challenges and Opportunities of the National Animal Genetic Resource Centres in IGAD Region

Strengths	Weaknesses / challenges	Opportunities
• Support from government; • Able to generate revenue through sale of semen, liquid nitrogen and artificial insemination equipment; • Sole institutions producing semen, hence heavily relied on for the country's demand.	• Wide mandate but limited resource allocations; • Inadequate marketing and resource mobilization skills, • Semen production and artificial insemination activities are limited to cattle, mainly dairy; • Virtually no breeding programmes in ASAL / Pastoral areas; • Uptake of Artificial Insemination technology is low in some areas, partly due to low awareness creation / weak extension service; • Weak private sector – low operational capacity (skills, knowledge and resources), and inadequate empowerment.	• Increasing dairy goat rearing in some IGAD Countries including Kenya, Uganda and Ethiopia provides an opportunity to widen the scope of semen production and technology development; • Increasing demand for animal products in the region as a result of increasing human population provides a wide range of opportunities in livestock value chain (pastoral areas in particular) – extension service, breeding programmes, and feedlot production systems.

b. Private Sector Players: Strengths, Weaknesses / Challenges, and opportunities

Veterinary Pharmaceutical companies

Table 10: Strengths, Weaknesses, Challenges and Opportunities of the Veterinary Pharmaceutical companies

Strengths	Weaknesses / challenges	Opportunities
• Well established industry in some IGAD Member States; • High demand for veterinary medicines exists; • Profitable business generally, mainly due to demand and the need to improve livestock productivity; • Availability of human resource for the industry – in majority of IGAD Member States, veterinarians and veterinary para-professionals are readily available; • Results oriented and better monitoring of performance; clear performance indicators and performance rewards in some cases; • Marketing strategies – flexibility in adjusting strategies to take advantage of emerging opportunities.	• Distribution of veterinary products in ASAL areas is hampered by insecurity in some areas, vastness of the area, poor road network and inadequate number of private animal health service providers for networking; • Manufacturing Units normally located in capital cities, hence high cost of delivery to consuming areas; too long distances to be covered; • Delays in Registration of products – may take up to 3 years in some cases; further, registration is required in each country – there is no mutually agreed registration protocols in the region; • payment for brands and trade licensing in very jurisdiction of a local government (leading to high cost of business transaction); • Distributors, stockists and users of veterinary pharmaceutical products do not have adequate business management skills; • No specific networks or associations for veterinary pharmaceutical manufacturers; • Inadequate forum to share concerns and ideas with veterinary authorities (CVO is the spokesman of the animal health industry in international arena, hence the need for closer linkages with industry organizations) – what is called for here is a regular Dialogue meeting between CVO and Vet Pharmaceutical Industry; • Use of ethnoveterinary products / indigeneous knowledge in all the countries especially in ASAL Areas – creates competition with pharmaceutical industry;	• Infrastructural development in ASALs – good road network, power supply, water supply (in favour of private practices and other outlets for veterinary pharmaceutical products); • Devolution - more focus on livestock and more resources for livestock at local government levels, hence higher demand for services and inputs supply including drugs; • Evolving or strengthening of Veterinary Statutory Boards – to wipe out quacks and fake drugs in favour of more and better use of genuine veterinary pharmaceutical products; • Veterinary authorities in the region are progressively taking better control of veterinary drugs in line with international good practices and guidelines. An example is the Kenyan case where the law has been changed, enabling the newly created Veterinary Medicines Directorate Council to take over the control of veterinary drugs and biologicals. This brings veterinary profession and veterinary authorities closer to veterinary pharmaceutical industry, providing an opportunity for improved consultation between the two and other stakeholders in the veterinary pharmaceutical industry.

Private veterinary practices (private Veterinarians, private veterinary paraprofessionals)

Table 11: Strengths, Weaknesses, Challenges and Opportunities of the private veterinary practitioners

Strengths	Weaknesses / challenges	Opportunities
• Technical Knowledge about the practice (Veterinarians) on which to build working experience; • Knowledge of the working environment and the societal culture and norms (especially veterinary paraprofessionals who operate within their home areas); • Ease of transport and ability to reach clients – walk, use of motorcycle (especially for veterinary paraprofessionals); • Known by the livestock owners and the community at large – well anchored in the community; high visibility in the community; • Ease of communication with clients through mobile phones; • Combination of services, e.g. clinical work, artificial insemination service and agro-vet shop; • Charges /fees not controlled (it is an affair between the service provider and the client); the service provider has the upper hand in determining the charges;	• Limited knowledge of practice • (especially veterinary paraprofessionals), quite often leading to incorrect diagnosis and treatment; unwilling to admit knowledge deficiency resulting in mishandling of cases; some livestock farmers do not heed to the advice provided; • Inadequate diagnostic facilities such as laboratories, especially in ASAL regions; inadequate use of laboratories - many cases are not confirmed but treated on the basis of tentative clinical diagnosis; • Post-mortem rarely done – unless highly demanded for special reasons but not for normal diagnostic purposes; • Weak referral system – majority of veterinary paraprofessionals unwilling to refer difficult cases to nearest Veterinarian (consider the Veterinarian as a competitor); • Opportunities for further training are rare and rarely get time to attend even short courses or continuous professional developments; • Limited credit facilities in majority of the Countries except Kenya (credit facility exists in Kenya – Kenya Livestock Trust Fund - K-LIFT) and Uganda – credit facility for Veterinarians; • Occasional failure to report notifiable diseases for fear of repercussions and involvement – no compensation for time spent on such cases);	• Continuous professional education being championed by veterinary associations in the region is a good opportunity to enhance knowledge; • Strengthening of Veterinary Statutory Boards and the supportive legal framework provide a window of opportunity to control manufacture, distribution, handling and use of veterinary drugs thereby eliminating quacks; • Emerging livestock enterprises such as dairy goat keeping, keeping quails, rabbits keeping, etc is good opportunity for more clinical work and other veterinary inputs; • Upcoming private training institutions in most urban centres offer business related courses and such courses can benefit private animal health service providers; some other similar courses are available on-line. • Connectivity through mobile phones - an opportunity to report diseases or to seek technical advice as and when necessary; • Devolution of government with more resources available at local government level creates an opportunity for public-private partnerships to emerge;

• Policy and legal backing - private veterinary practices are legally recognized all over the world and are well anchored in the policy framework.	• Competition from quacks. Similarly, farmers can access drugs directly from chemists or other outlets and treat their animals, a common practice mainly in ASAL areas; • Field diagnostic manuals are rarely available to private animal health service providers; some development agencies have developed field diagnostic manuals but distribution is highly limited; • Inadequate business management skills – many animal health service providers have had no opportunity to attend business management courses; further, many of them are not on digital platform – computer use and knowledge is limited; • Veterinary paraprofessionals – technical support from supervising veterinarians is inadequate (Veterinarians not willing to share knowledge with paraprofessionals, and when given it is in 'small doses' (quoting one of the Paraprofessionals); • Frequent drought and famine in ASAL areas: impoverish community, thus disenabling them to pay for services provided by animal health service providers; relief interventions (free or highly subsidized veterinary drugs) have negative impacts on any upcoming private veterinary practice initiative; weak monetary economy in ASAL areas does not attract veterinarians' investments. Veterinarians have high expectations in terms of income and status in the community and environmental conditions in the ASALs are unfavourable (Okwiri, Odondi & Kajume,2001).	• Livestock intensification especially in high potential areas – high disease risks and therefore closer veterinary attention and interventions; • Opening up of ASAL areas (improvement of infrastructure and improved security in particular) is an opportunity for opening private veterinary practices, at least in some strategic areas.

Private training institutions

Table 12: Strengths, Weaknesses, Challenges and opportunities of the private veterinary training institutions

	Weaknesses / challenges	Opportunities
• Commercially oriented; usually profitable enterprises; • Small enrolments of students compared to public training institutions, and therefore easy to manage and control.	• Limited resources (very few private training institutions are offering recognized veterinary courses in the IGAD Region due to high cost to meet the requirements); • Normally admits candidates with relatively lower grades than those admitted in public training institutions; • Inadequate training facilities, and not willing / able to hire or attract highly trained professionals due to high level of remunerations demanded.	• Demand for animal health services and limited public resources to meet required expansion provides an opportunity for the government to give more room for the private sector to grow; • Livestock keeping is an 'inherited tradition' that is deeply rooted in the culture of many communities in the IGAD region. The private training institutions have an opportunity to interact more with the communities to establish existing training needs in livestock / animal health and develop appropriate training packages to meet the specific needs. For instance, there could be a training need in the area of ethno-veterinary knowledge – an area that is of some interest to livestock keeping communities.

Farmers and Farmers' organizations (producer organizations, marketing organizations etc)

Table 13: Strengths, Weaknesses, Challenges and Opportunities of the Farmers and Farmers Organizations

Strengths	Weaknesses / challenges	Opportunities
Farmers' organizations: • Needs driven and therefore better prospects for sustainability (provide services such as extension services, artificial insemination service and supply of inputs including animal feeds and minerals); • Largely owned and managed by the members to address felt needs and interests, hence good prospects for sustainability; • Provide good avenues for information dissemination to members (information about vaccination campaigns, government policies, new technologies, etc); • Has some bargaining powers because of numbers (can negotiate for favourable	• Weak management –members of management Unit (e.g. Management Committee) not necessarily elected on basis of good qualifications or management skills, but more so on the basis of status in the community; • Amenable to political interference – some politicians may wish to use the organizations to advance their political interests and this does not augur well with the overall objective of the organizations; • Amenable to corruption – some farmers' organizations have substantial assets including finances and therefore prone to corruption and other malpractices; • In many cases, the employed service providers do not have self-drive and commitment due to inadequate motivation; efficiency and effectiveness in service delivery are compromised to some extent; • Weak monitoring and evaluation systems; feedback on service delivery is rarely sought from members; • Low awareness / knowledge on export and import requirements; Limited international exposure – inadequate understanding of global or regional marketing requirements;	• Regional approaches and integration (e.g. EAC, IGAD) – opportunity for livestock farmers' organizations to grow into bigger regional organizations such as Federations and Unions; • Regional integration: an opportunity for Farmers' organizations to network and share experiences regionally; • Demand for information and technological advances in livestock management, disease control and breeding is growing – farmers' organizations are good avenues for promoting technological advances and best practices from elsewhere; • Progressive uptake of youth and technology in farmers' organizations – opportunity for improving efficiency and effectiveness in their management; • Governments' goodwill, willingness and commitment to empower farmers – good opportunity to lobby government for support (improvement of policy and legal environment)

prices for inputs and accrued benefits can be passed on to members); • Driven by desire to meet members' expectations (service provision and value for money undertakings); low profit margins for the services provided; • Legal recognition – established within the law and operate within a legal framework; Livestock Farmers: • Hardworking as individuals (self-drive); own livestock / animals and therefore willing to care for them; • Adequate numbers to form associations and networks that can contribute significantly to effective service delivery to individual members.	• Inadequate capacity and skills to mobilize resources; • Majority are smallholder farmers and pastoralists with limited knowledge and skills in livestock health, welfare and management; • Weak participation in the development of policy and legal frameworks; • Limited ability to attract investments and to graduate from subsistence level of farming to viable and commercially oriented livestock farming.	• IGAD Member States have greatly embraced 'public participation' in policy and legal formulations as a good practice in management of public affairs. This is a good opportunity for livestock farmers to strengthen their participation in relevant policies and regulations; • Existence of political will to support farmers to graduate from subsistence farming to commercial farming is an opportunity for livestock farmers to form or join associations that will attract investments in livestock sector and also create better avenues and opportunities for improved service delivery, market access and trade.

Veterinary Professional and Paraprofessional Associations (e.g. Uganda Veterinary Association, Kenya Veterinary Association, Ethiopia Veterinary Association, Kenya Veterinary Paraprofessional Association etc)

Table 14: Strengths, Weaknesses, Challenges and opportunities of Veterinary Professional and Paraprofessional Associations

Strengths	Weaknesses and Challenges	Opportunities
• Registered membership organizations; • Regular forum for sharing technical knowledge and information (annual conferences and symposium) • Democratic leadership – anchored in their constitutions; • Potential growth in terms of membership – graduates from training institutions every year; • Diversity of membership – members drawn from public institutions, private organizations, NGOs etc. • Wide distribution of members within the Country; large membership; • Capacity for advocacy and lobby; • Operational Network (Vet forum for Kenya and Uganda Veterinary Associations); • Professional Associations: linkage with Regional Veterinary Associations (e.g. Commonwealth Veterinary Association in case of KVA and UVA) and World Veterinary Association;	• Weak management at secretariat level; • Weak demonstration of relevance to society / community (low visibility especially in ASAL areas); • Inadequate adherence to ethics among members (both professionals and paraprofessionals); • Weak resource base – limited sources of finances (rely mainly on membership fees); • Inadequate membership recruitment strategies – a significant number of professionals and paraprofessionals is not joining the Associations; • Inadequate organizational policies and management systems; • Weak inventory of knowledge asset within Associations; • Lack of mentorship for the new graduates joining the Associations; • Limited formal employment opportunities for potential members - both veterinarians and para-veterinarians; • Weak database and information management systems; • Weak commitment of members to their Associations; • Limited scope /range of professional skills.	• Requirement for continuous professional development by regulatory bodies – an opportunity for Associations to improve technical skills and knowledge among members through training; • Increasing number of livestock farmers who demand quality services – an opportunity for Associations to inculcate principles of ethics and professionalism among members; • Willingness of Development Agencies to work in partnership with Professional and paraprofessional bodies – an opportunity for Associations to develop viable project proposals and eventual participation in the project implementation, thus providing an opportunity for better visibility; • Demand for better regulation of veterinary drugs and control of the veterinary profession – an opportunity for advocacy and lobby for improved policy and legal framework, and enforcement of regulations; • Policy on privatization and positive policy statements on public-private partnership: an opportunity Associations to lobby for improved PPP in animal health service delivery; • One Health Concept: An opportunity for veterinary professional and paraprofessional Associations to adopt a holistic approach to control of zoonotic diseases; • Large membership: An opportunity for Associations to form savings and credit Units (e.g. Savings & Credit Cooperatives- SACCOs) to attract more members and increase resource base for the Associations.

Agro-Vets and Veterinary drugs stores

Table 15: Strengths, Weaknesses, Challenges and opportunities of Agro-Vets and Veterinary drugs stores

Strengths	Weaknesses / challenges	Opportunities
• Individual initiative, hence self-driven and commitment; • Minimal travel costs – clients come for their requirements; supplies from manufacturers are also delivered to them; well linked to suppliers • Mainly operate from urban centres – highly visible to prospecting clients; • Combination of several products lines (veterinary drugs, animal feed, minerals, agricultural chemicals, service provision, etc); • Different clienteles – professionals, farmers, traders • Technical knowledge of products (where relevant technical personnel is engaged).	• Weak business management skills – on-job learning in majority of cases; • Some personnel engaged in sales at the counter are not trained and have limited knowledge about the products they are selling; those trained rarely an opportunity for refresher training • Hardly get time to attend continuous professional development trainings unless held within close proximity; • Friendly credit facilities are rare – have to cope with high interests on bank loans; • ASAL areas agro-vets / veterinary drug shops – suffer low business period during drought due to migration of livestock; • Unfair Competition from illegal drugs sellers who in some cases source poor quality / fake drugs and sell them to livestock keepers directly and in open air markets especially in some parts of ASALs; • Demand for inputs goes down when drought strikes – inability to pay by livestock keepers; • Sell veterinary drugs to all clients with or without prescriptions, exploiting the weak monitoring and control by the regulators.	• Improved regulatory framework for the control of veterinary drugs – regulatory bodies are slowly responding to concerns about lack of proper control of veterinary drugs and this is an opportunity for streamlining the entire veterinary drugs value chain including distribution and drug outlets; • Continuous professional development (CPD) training is gaining momentum in the region and some regulatory bodies such as Kenya Veterinary Board are making it mandatory for veterinary professionals and paraprofessionals to attain a certain level of attendance (in form of CPD Points) per year for retention in the Register; these are essentially refresher trainings that are beneficial to agro-vets operators and an opportunity to improve knowledge; • Further, it is becoming increasing mandatory for agro-vets and veterinary drug shop operators to have a minimum qualification of a certificate in animal health – an opportunity to ensure quality service and products in all outlets.

Processors (e.g. meat, hides and skins and milk processors)

Table 16: Strengths, Weaknesses, Challenges and opportunities of Processors of the livestock value chain

Strengths	Weaknesses / challenges	Opportunities
• Main Livestock Industrial base – industrialization is a key pillar in livestock development plan; • Well established enterprises in IGAD Region – abattoirs, dairy plants, meat processing plants, hides and skins processing etc); • Profits-driven enterprises – Well sustained; • Useful sources of data and statistics related to animal products and by-products; • Locally available 'raw materials' (animals) and labour; • Committed to ensuring food safety to the extent of their understanding – there are lapses due to inadequate understanding and knowledge of food safety dynamics.	• Operate on profits making and cost reduction strategies – sometimes compromising standards and quality; • More focused on end-products quality and less attention, or inadequate knowledge, on the quality of processes and practices along the entire meat or milk value chain; • Inability to keep abreast with modern technology and equipment – old technology and equipment still in use in abattoirs and milk processing plants; • Limitations in attaining international standards – quality assurance, food safety standards, requirements pertaining to premises or establishments; operational standards (e.g. HACCP) etc.; • Limited international exposure – inadequate understanding of global or regional marketing requirements; • Conflict in some parts of the region (Somalia, South Sudan) does not provide an enabling environment for trade in livestock and livestock products with other Member States.	• Provision of disease surveillance data – abattoirs, milk collecting centres, and milk processing plants could be more useful in providing disease surveillance data if appropriate linkages with Epidemiology Units are established; • Regional market for animal products is huge (enormous potential for trade) – providing an opportunity for harmonizing trade requirements including policies and legislation on animal health and food safety; • Demand for livestock products in the region provides an opportunity for expansion of livestock- based industries; • Food safety standards largely demand value chain approach – a good entry point and an opportunity to introduce 'Good Hygiene Practices' along meat or milk value chains; this enables the players to understand food safety standards in totality;

Animal Feed Manufacturers and Suppliers

Table 17: Strengths, Weaknesses, Challenges and Opportunities of Animal Feed Manufacturers and Suppliers

Strengths	Weaknesses / challenges	Opportunities
• Profits oriented enterprises – well sustained; • Bulk of the ingredients are available locally.	• Competing for the same ingredients (maize and wheat) with manufacturers of flour for human consumption; • Weak regulatory framework – regulatory bodies do not have sufficient capacity to sustain quality checks and monitoring; Ethiopia has Veterinary Drug and Animal Feed Administration and Control Authority but the Authority has limited human capacity and equipment – unable to sustain quality monitoring of animal feeds; other countries do not have a regulatory body, or an elaborate regulatory framework, mandated to deal with animal feed safety and quality; OIE on the other hand focuses more on animal feed safety with little or no attention on feed quality; • Distribution of commercial animal feeds is limited to dairy farming areas. Availability in ASAL areas is minimal; • Use of antibiotics in animal feeds – risk of antimicrobial resistant pathogens; • Commercial animal feeds are expensive and unaffordable to many livestock owners: an assessment on the cost of production structures in dairy systems in Kenya (Kenya Dairy Board and Egerton University) showed that feed concentrates form the largest component (41.8%)of the total variable direct costs for zero grazing production system;	• Demand for animal feeds, especially in ASAL areas is high; during drought periods animals migrate to far distances in search of pasture; supply of animal feeds in ASAL areas as an emergency intervention is of limited impact - these circumstances provide an opportunity for alternative responses including long term pasture development and management programmes; pilots have proved successful in some areas – Neighbours Initiative Alliance pilots on pasture development in Kajiado and Narok (Kenya) are good examples; • Shortage of animal feeds in the region calls for an elaborate strategy addressing pertinent issues including capacity building in animal nutrition; rangeland management; technical skills in pasture production, conservation and utilization; and research focused on animal feeding.

Non-Governmental Organizations

Table 18: Strengths, Weaknesses, Challenges and Opportunities of Non-Governmental Organizations

Strengths	Weaknesses / challenges	Opportunities
• Work close to communities – communities are the main target beneficiaries of NGOs' projects; • Results oriented – keen to see results within the project period, especially on livelihoods • Monitoring and Evaluation (M&E) well embedded in the projects; • Work across sectors (animal health, animal production, water, health etc); • Collaborate well with other players including government departments; • Have relatively adequate resources for the activities they target to undertake (activity-based budgets); • Lean organizations and therefore easy to manage; • Well adopted to working in ASAL areas – animal health service delivery in ASAL areas has been facilitated by NGOs; Community animal health service delivery common in most of the ASAL areas has been heavily supported by NGOs; • Not driven by profits; They are not profit-making organizations; however, they need to design bankable projects for donor funding to keep afloat; • Comparative advantage in advocacy work – policy lobby and advocacy, technology uptake or dissemination of a good practice.	• Projects of short duration – difficult to measure impacts; sustainability beyond the lifespan of the project doubtful in majority of projects; • Short time for community dialogue and buy-in; • Do not have enough staff – quite often facilitate government staff to undertake the activities; • Donor- dependent for funding; possibility of donor influence to undertake activities that are not necessarily of priority to the communities; • Policy and legal constraints – they must operate within the limits of legal and policy framework; in some countries (e.g. Ethiopia and Sudan) they can facilitate training and operations of CAHWs whereas in Kenya the legal framework is restrictive on CAHWs' training; • In majority of cases communities' expectations go beyond what the project is intended to achieve.	• Their ability and experience to work in ASAL areas and close to communities place them in a good position to work with government personnel in awareness creation programmes and other community- based activities; • NGOs can work closely with government personnel to facilitate collection of data from community on disease situations and patterns (disease surveillance); similarly, they can facilitate disease control activities such as awareness creation, vaccinations, monitoring etc; • Animal health service delivery in ASAL areas is of critical importance and so long as private sector is absent and the government's presence is minimal, the role of NGOs will remain unshaken; circumstances favour an increased role of NGOs in facilitation of animal health service delivery in these areas.

09. ROLES OF PUBLIC AND PRIVATE SECTORS IN PROVISION OF ANIMAL HEALTH SERVICES IN IGAD REGION

a. Public Sector (table 19)

Table 19: The Role of the Public Sector in Provision of Animal Health Services

Policy and legal framework • Formulation of policies with participation of private sector; • Legislation in support of the policies; • Enforcement of enacted laws to ensure compliance.
Support to the private sector • Enabling policies and legislation for the private sector – conducive environment (e.g. improving the policy and legal framework related to control of animal health profession as well as the control of veterinary drugs); • Facilitate establishment of Credit schemes to support private sector.
Inspection and certification of live animals and animal derived products • Facilitation of trade; • Food Safety (control bio-safety threats from animals) - promotion of human health; • Ensure compliance with standards.
Control of transboundary animal diseases • Design control strategies; • Disease reporting and Surveillance (TADs);; • Supply of inputs including vaccines, cold chain, materials etc.; • Vaccinations and post vaccination zero-monitoring; • Resources – human, finances and infrastructures (e.g. labs, quarantine facilities, etc.; • Coordination; • Livestock movement controls; • Facilitate harmonization of control and surveillance activities with neighbouring countries; • Participation in regional control programmes; • Evaluation of control programmes.
Control of zoonotic diseases (conspicuous private sector participation) • Design control strategies; • Provide mechanism for private sector participation; • Provision of inputs such as vaccines; • Vaccinations; • Monitoring and evaluation of control programmes; • Livestock movement controls.
Control of disease vectors such as tsetse fly: • Design control strategies and programmes; • Procurement and supply of inputs; • Monitoring and evaluation of control activities; • Seek for external support (resources).

Livestock identification and traceability:

- Devise appropriate livestock identification and traceability system;
- Put in place mechanism to facilitate participation of the private sector including livestock owners;
- Back up by legal instruments.

Veterinary extension service

- Setting of strategies with participation of private sector;
- Production of relevant materials;
- Provision of extension services, especially in hard to reach areas;
- Packaging and Dissemination of relevant research findings;
- Establishment of livestock training centres.

Production and importation of vaccines for the control of TADs and other diseases

- Sufficient quantities;
- Ensure quality requirements;
- Distribution.

Note: production is ideally the private sector's responsibility but it is for the time being a public responsibility on a transitional basis;

Training of animal health service providers

- Establishment and support of training institutions;
- Provision of financial resources to run the institutions;
- Review of training curriculum;
- Set training requirements and standards based on international standards;
- Monitoring to ensure standards are maintained.

Response to livestock emergencies (droughts, diseases, floods etc) – in collaboration with private sector and Non-Governmental Organizations

- Carry out Assessments;
- Establish response requirements and operational modalities with participation of other players including beneficiaries;
- Coordinate responses and ensure quality and accountability;
- Mobilize resources;
- Monitoring and evaluation of responses.

Animal health research

- Research agenda setting (participation of private sector and NGOs is important);
- Mobilization and Provision of resources for research;
- Conduct research (with involvement of private sector);
- Packaging and dissemination of research findings (with participation and involvement of the private sector);
- Linking and collaboration with International and regional institutions / organizations interested in research.

Provision of services on transitional basis:

- The Public Sector is obliged to provide basic services such as clinical, artificial insemination and tick control services in areas where private sector is either absent or is too weak to provide such services. in such cases the private sector needs to be progressively empowered to take over.

b. Private Sector (table 20)

Table 20: The Role of the Private Sector in Provision of Animal Health Services

Supply of veterinary drugs and other inputs • Manufacture, and importation (where necessary); • Wholesale and retail outlets (veterinary drug stores and agro-vets); • Importation of vaccines (not available in the country).
Provision of clinical services • Establishment of animal clinics; • Pastoral mobile clinics; • Supply of drugs to clients; • Disease diagnosis and treatment; • Advisory service to clients; • Reports to relevant authorities for data capture.
Limited certification of live animals and quality control of products • Certification for local trade (e.g. pregnant cows, health of breeding bull); • Quality control in production and distribution points, e.g. testing of milk in milk collecting centres and in processing plants, implementation of HACCP system by some meat processors etc.
Delivery of artificial insemination services • Subject to approval and licensing by relevant authorities, e.g. Veterinary Board; • Provision of appropriate infrastructure such as Premises as required by the law; • Procurement of semen, liquid nitrogen and AI equipment (locally or through importation); • Provision of Artificial insemination services to clients; • Reports to relevant authorities for data capturing.
Disease control in accordance with the legal provisions • Procurement of vaccines (locally or through importation); • Vaccination against some diseases such as Newcastle disease, Gumboro, Rabies, etc.; • Vaccination against TADs under delegated sanitary mandate (contractual arrangements with government); • Installation of bio-security measures in some farms (poultry farms and particularly in hatcheries); • Disease reporting to veterinary authorities; • Submission of reports to relevant authority for data capturing; • Compliance with regulations (e.g. presentation of animals for vaccinations and treatment, care for animals, respect livestock movement rules, etc).
Training of animal health service providers, e.g. certificate or diploma in animal health / production as well as Inseminators • Subject to meeting the requirements and standards set by the relevant authority, e. g Education Council, Veterinary Regulatory Board etc.; • Approved curriculum.
Participation in the control of TADs • Awareness creation and information dissemination in their operational areas; • Vaccination – contractual arrangement /agreement with Government; • Reporting incidences or occurrence of scheduled diseases (including TADs) to veterinary authorities.

Control of Disease vectors, e.g. ticks • Management of dip tanks in some cases (privately owned farms) and communal dips; • Home spray by livestock farmers.
Establishment of private disease diagnostic facilities • Laboratories; • Clinics.
Facilitation of information, knowledge and experience sharing • Platform for information and experience sharing, e.g. Vet forum; • Organizing trainings for professionals e.g. continuous professional development training sessions; • Farm visits to advise livestock farmers (private animal health service providers).
Supply of animal feeds 1) Animal feed ingredients; 2) Production of commercial animal feeds; 3) Making and selling of hay.
Food hygiene and zoonotic disease control • Provision of standards and guidelines in abattoirs and milk processing establishments, as well as in other livestock related processing facilities; • Provision of quality and safety assurance systems in abattoirs and milk processing plants; • Adherence to good hygienic practices along animal value chain; • Keep records as directed by relevant authorities.

Figure 4: Livestock breeders show held in Nairobi, Kenya.

c. Non-Governmental Organizations (table 21)

Table 21: The Role of Non-Governmental Organization in Provision of Animal Health Services

Facilitation of disease control and animal health service delivery • Facilitate government personnel to carry out vaccinations and treatments, disease surveillance and baseline surveys; • Procurement of drugs and vaccines; • Provision of transport and operational funds.
Training and extension services (capacity building for communities) • Production of training and extension materials; • Carry out actual training, e.g. pastoral field schools; training of CAHWs.
Advocacy work • Conducive policies and laws; • Animal welfare issues; • Enforcement of policies and laws.
Support to private sector • Linking private animal health service providers to reliable drugs suppliers and supporting the former to establish sustainable animal health related business enterprises, e.g. SIDAI model; • Partnership with private sector through animal health/ welfare projects.
Livestock emergencies • Facilitate community dialogue and participation; • Provision of resources to facilitate delivery of interventions; • Purchase of drugs and vaccines to carry out veterinary and other related interventions – veterinary, destocking, restocking, water etc.; • Facilitate evaluation of interventions / programmes.
Facilitation of information and experience sharing • Platform for information and experience sharing (workshops).
Capacity building for government and private sector personnel • Organizing trainings for both government and private sector personnel; • Sponsoring candidates for training.
Resilience and livelihoods projects (alone or jointly with local or international institutions) • Breeding programmes; • Pasture development and conservation pilot projects; • Water projects.

10. ROLES OF PUBLIC AND PRIVATE SECTORS IN PROVISION OF COMMON ANIMAL HEALTH SERVICES: Current status in Member States

Table 22: Current Roles of Public and Private Sectors in Provision of common Animal Health Services in IGAD Member States

Country	Animal Health Services and the lead Service Provider (public or private)								
	Policy Dev.	Dis Diag & Treat (clinical work)	VC (e.g. tick control)	DC & Surv. (TADs & other notifiable diseases)	Art. INS. SERV.	training of animal health service providers	EXT.	Meat Insp.	Vac. Prod./ import.
Ethiopia	public	Public	public	public	public	public	public	public	Public
Uganda	public	Private	private	Public	private	public	public	public	Public
Kenya	public	private	private	public	private	public	private	public	public
Somalia	public	Private	private	public*	-	public	private	public	private
Sudan	public	public	public	Public	private	public	public	public	public
Djibouti	There was no response from Chief Veterinary Officer, Djibouti.								
S. Sudan	public	public	private	public*	-	public	public	public	public

Note: Policy Dev.- policy development; Dis. Diag. & Treat. – Disease Diagnosis & Treatment; VC – Vector Control; DC & Surv.– Disease control & surveillance; ART.INS. SER –Artificial Insemination Service; EXT – Extension Service; Meat Insp. – Meat Inspection; Vac.Prod./ import. – Vaccine Production / importation

a) Public*- Weak public sector occasioned by insecurity/conflicts (political instability)
b) Sudan: Though Government is heavily involved in clinical services, the Country has the highest number of licensed private veterinary practices (1,819) in the region.
c) Ethiopia: Most of the services are provided by the Government but privatization has been accepted and the Country is already developing a privatization road map. Although Government is formally providing the clinical services, it is only meeting approximately 30% of the total demand for veterinary drugs and clinical services while the rest of the demand is met by the private sector, both formal and informal (Directorate of Veterinary Services, 2014).
d) Training of animal health service providers – private sector is increasingly getting involved especially in Sudan and Kenya.
e) Meat inspection and hygiene – still in the domain of Government with virtually no engagement of private sector.
f) NGOs are involved in most of the functions but their role is mainly facilitation. Like private sector, NGOs are not engaged in meat inspection and hygiene.

Table 23: Estimates of Veterinary professionals and Veterinary Para-professional's member states

Country	No. of vets	No. of vets in public sector	No. of private veterinary practices	No. of para-professionals	No. of para-professionals in public sector
Sudan	4,954	1571	1819	1,055	1055
S. Sudan	150	60	5	400	150
Somalia	1380	980	295	1,085	1085
Uganda	1064	607 (587*)	Information not available	3,000	40
Kenya	1,864 (registered by Kenya Vet Board)	539*	140 Vets practices 354 para-professionals (KVB Register)	6033 (cert.) 753 (Diploma) 75 (degree)	Approximately 2000**
Ethiopia	Ethiopia was visited but no data was availed immediately. Promised data not received.				
Djibouti	There was no response from Djibouti Chief Veterinary Officer				

*Source: EAC: Report on Veterinary Services in the EAC, 2015.
**source: personal communication with the President, African Veterinary Technicians Association (Mr. Benson Oduor Ameda).

Observations:

1. Data keeping and management is unsatisfactory in nearly all the Countries;
2. The devolved system of Government with particular reference to Kenya has made it difficult for the Chief Veterinary Officer to capture data from lower levels of government, e. g. Counties;
3. Number of formal private practices is considerably low compared with number of veterinary professionals and para-professionals, an indication that informal service providers take a significant proportion of animal health service delivery. In Ethiopia for example, despite heavy presence of Government and formal private sector in clinical services, it is estimated that informal sector takes 27% of the total demand for veterinary drugs and clinical services (Directorate of Veterinary Services, 2014).

11.POLICY GAPS

Policy gaps have been identified based on information received from various stakeholders and key informants interviewed, as well as the information received from Chief Veterinary Officers. OIE-PVS Evaluation reports of the veterinary services of some IGAD Member States have also provided some valuable information.

Inadequate public –private partnership in animal health, and particularly in disease control
The FAO/OIE global conference on Foot and Mouth Disease Control held in Bangkok, Thailand, from 27 to 29 June 2012 noted that:

- "The control of FMD and other TADs cannot be sustained if good governance of animal health systems, including effective veterinary services complying with OIE standards and continuously updated legislation, is not in place and supported by appropriate public-private partnerships";

- "Capacity building at the technical and managerial level as well as regular and effective communication to build public-private partnership and gain the support of the animal owners is crucial for any control strategy";
- Within IGAD Region, there is no Member State that has developed a formal public-private partnership framework in animal health or in disease control in particular. There are however strong statements highlighting the intention of government to promote PPPs. The statement below is in one draft policy document (Kenya Veterinary policy, April 2015, draft);
- 'The government shall facilitate the growth of the private sector and encourage its organization into producer, processor and marketing associations, groups and institutions. It shall promote PPPs in delivery of private and shared goods and services in the animal resource industry and foster close cooperation with all development partners and financial institutions------';
- A public-private partnership framework with clear indications of how the PPPs shall be promoted (specific interventions, outputs and monitoring indicators) is necessary to actualize the public-private partnership;

Further, disease reporting by the private sector (private animal health service providers) is weak. Whereas most of the Countries in the region have the law in place requiring private sector to report diseases to veterinary authorities, this is usually not adhered to due to weak linkage between the private sector and the veterinary authorities, as well as due to lack of or unilaterally defined reporting system with little or no involvement of the private sector.
Overall, there are inadequate policy guidelines and strategies for the promotion of public-private partnership in various animal health disciplines including disease control and surveillance, animal health extension service and veterinary public health among others.

Inadequate regional harmonisation of animal health policies and sanitary standards:
For trade purposes, it is desirable for IGAD region to have harmonized animal health policies and sanitary standards that will serve the region as well as facilitate trade beyond the region. The regional standards should take into account WTO and other international requirements. As it stands now, there are no agreed or harmonized sanitary standards for IGAD Region. However, a regional SPS strategy has been drafted and is awaiting validation by Member States. Once validated, it will be necessary to monitor its implementation with the aim of refining and making any required adjustments.

AU-IBAR and IGAD have developed 11 Standard Methods and Procedures (SMPs) for various Transboundary and trade sensitive animal diseases (e.g. Foot & Mouth Disease -FMD, Rift valley Fever - RVF, Brucellosis, Contagious Bovine Pleuropneumonia -CBPP, Contagious Caprine Pleuropneumonia - CCPP, Peste des Petits Ruminants -PPR, Sheep and Goat Pox) and quarantine as well as 16 laboratory Standard Operating Procedures (SOPs) for Countries in the Greater Horn of Africa (Evaluation report of USAID /KEA Project: Standard Methods and Procedures for Animal Health, April 2016). IGAD Member States have the opportunity to use these SMPs and SOPs as the benchmarks in the harmonization of disease control and surveillance protocols.

Inadequate information management systems in animal health service delivery:
Within each country and in the region, there are many organizations and other interest groups involved in animal health service delivery. However, there is no comprehensive database to show who is doing what and where, competencies, interventions and outputs etc. Generally, the stakeholder mapping (private and public-sector entities, NGOs, other development agencies) is necessary for purposes of monitoring, knowledge and information sharing, experience gathering and sharing, communication, planning etc. Mapping of animal health service providers by the Veterinary Authorities on regular basis needs to be embraced within the IGAD region. Similarly, data related to socio-economic impacts of animal diseases

or veterinary input into the economy is either lacking or scanty. There is therefore need for reliable database and information management systems.
Most of the informants interviewed were in agreement that the Regional Member States lack adequate and reliable livestock /animal health related data for planning purposes.

Insufficient policy direction with regard to livestock related emergencies: Early detection, decision making and response.

Livestock emergencies in the IGAD Region are mainly occasioned by droughts, floods and diseases and are normally handled as a small component of a disaster and without due regard to their impact on livelihoods of the thousands of people who depend largely on livestock. Responses to livestock emergencies including disease outbreaks quite often come too late. National policies in the IGAD Region do not adequately provide for early detection and response to livestock related emergencies. However, Ethiopia has developed National Guidelines for Livestock Relief Interventions in Pastoralist Areas of the Country which, to a large extent, provide a way forward in addressing livestock related emergencies. Kenya, on the other hand, established a National Drought Management Authority (NDMA) in November 2011 and subsequently assented through an Act of Parliament in April 2016 as a specialized, permanent institution to supervise and coordinate drought management activities in the country. At the regional level, there is insufficient coordination mechanism for livestock related emergencies including sharing of information emanating from early warning systems.

Veterinary Education and continuing professional development

1. **Inadequate harmonization of training curriculum:**

Animal Health Training Institutions, a large majority of them being public entities, are well established in Ethiopia, Uganda, Kenya and Sudan – training both Veterinarians and veterinary paraprofessionals. The interactions among these Institutions, at least according to information from those interviewed, is minimal leaving a big room for improvement. Further, knowledge and skills need to be standardized for acceptance in the whole region and the starting point would be the harmonization of training curriculum within the region.

2. **Knowledge gap on Wildlife:**

Whereas Veterinarians are relied upon in wildlife health service delivery, the Veterinary training on wildlife in Veterinary Schools is relatively weak. Exposure to wildlife and wildlife case attendance during training is minimal in majority of Veterinary schools. In view of the importance of wildlife in animal disease transmission it would be of good value if veterinary training on wildlife could be improved appropriately to better equip the Veterinarians and veterinary paraprofessionals in the task of handling wildlife.

3. **Continuing professional development**

It is evident from OIE Evaluation of Veterinary services reports that continuing education is a major gap that needs to be addressed. Some Veterinary statutory boards (e.g. Kenya Veterinary Board) have provided for continuing education in the legal framework including approval for continuing education service providers. However, majority of the Member States do not have adequate mechanism for delivery of continuing veterinary education.

Inadequate mechanism for harmonized registration of veterinary drugs and biologicals

Each Country in the region has its own registration process for Veterinary drugs or vaccines and each product, whether registered in the exporting country or not, will have to undergo the registration process in the importing country. There is no mutual recognition of the registration protocols. Registration period can range from 3 months to 2years depending on the efficiency and capacity of the Registration Authority.

This underscores the need for developing mutual recognition agreements among Member States on drugs registration protocols.

Weak Animal Health Extension Service Delivery:

It is generally accepted in nearly all Member States that public extension service delivery has been on the decline since the onset of the privatization policy. On the other hand the provision of extension service by the private sector is narrowed to a specific segment depending on the interest of the private sector player involved and more often than not it is selectively tilted towards promotion of a certain product. The decline in extension service delivery has contributed to:

- Low uptake of artificial insemination service in some countries, e.g. Uganda;
- Exploitation of livestock keepers by middlemen especially in marketing of live animals and products – no proper marketing information to primary producers;
- Wide knowledge gap among the livestock farmers in policy, legal, livestock farm management, and entrepreneurship among others;
- Inability of most of livestock owners to graduate from subsistence livestock keeping to business-oriented livestock keeping especially in ASAL areas;
- Inadequate participation of livestock keepers in disease control and prevention;
- Low awareness on animal welfare issues;
- Inadequate consumer awareness on food safety measures.

There is consensus among the stakeholders consulted that veterinary extension is a critical input for animal health, welfare, animal productivity, and for protecting humans from bio-threats originating from animals. There is therefore need for a policy change to revitalize animal health extension service. Uganda is already changing direction to make livestock extension service public sector - driven and more results oriented. In all cases, whether the public sector leads the way or not, all the parties including the public sector, private sector, NGOs, and livestock keepers have a role to play and must be enabled to participate fully.

Inadequate collaboration and linkages among the institutions and organizations

The current linkages and collaboration is more on ad hoc basis or based on a special need rather than through a structured mechanism that promotes better interaction and knowledge / information flow. Institutions of higher learning (University Veterinary Colleges), National research organizations and government mainstream livestock / veterinary departments, as well as NGOs, can benefit from each other more if there was a formal mechanism of mutually harnessing each other's strengths. Possible areas of mutual collaboration and benefits include:

- Field challenges to inform research – nutrition issues, lack of socio-economic data related to livestock, application of SPS Standards, disease management issues, hygiene practices along meat and milk value chains etc.;
- Innovations - promotion, refinement of innovative ideas and application;
- Technology validation, testing, refinement and feedback;
- Disease outbreaks and referral clinical cases for research;
- Upgrading of skills for field and laboratory officers;
- Research on vaccines for emerging diseases;
- Genetic mapping and conservation of indigenous breeds
- Sharing of field data and indigenous knowledge for research;
- Continuous professional education.

A recent study in India (S.V.N. Rao , V. Rasheed Sulaiman, K. Natchimuthu, S. Ramkumar , & P.V.K. Sasidhar 2015) showed that India's veterinary service delivery is constrained not due to lack of organizations or programmes, but due to the inability of the organizations to collaborate with each other.

The same study recommended that a mechanism to promote better interaction, knowledge flows and collaboration among the relevant bodies be institutionalized for effective service delivery. Further, according to OIE, the Veterinary Authority alone speaks for the Country as far as official international dialogue is concerned. For this reason, formal relationship with livestock industry organizations, associations and other Sector players is critical.
The idea of better collaboration and linkages can be extended to a regional level (IGAD Region) – to promote regional collaboration and linkages among institutions with similar mandates and objectives.

Insufficient buy-in and lack of appropriate legislation to support animal registration, identification and traceability

Livestock identification and traceability system (LITS) is an important component of disease control and is therefore of great value in supporting trade in live animals and their products in IGAD Region. It has been highlighted in various policy documents as an integral part of disease control system. The workshop on 'Livestock Identification and Traceability Systems in the IGAD Region' held on 4 and 5 February 2014 at the International Livestock Research Institute (ILRI), Addis Ababa, Ethiopia, identified the following challenges in the design and implementation of a regional LIT system:

- Low capacity to design and implement LITS;
- Member States are at different stages of implementation and have different priorities;
- Funding constraints;
- How to demonstrate economic benefits for LITS
- Lack of legal framework; and
- Cultural differences between countries among others.

LITS has been piloted in nearly all the IGAD Countries for various reasons including disease control (e.g. identifying vaccinated animals), trade facilitation, and as a means of combating cattle rustling.
However, there has been no coordination of the effort on a regional basis, thus posing a setback to the regional roll out. The rolling out process will require a combination of strategies including:

- Strengthening of policy framework;
- Buy-in by stakeholders including livestock owners and traders (awareness creation and sensitization);
- Promotion of the system and securing political goodwill;
- Harmonization of LITS in the region;
- Legal framework;
- Regional coordination.

A regional LITS is necessary to support livestock trade; as a prerequisite, it is important to secure the understanding and support of all the players including government, private sector, NGOs and livestock owners.

Insufficient understanding and skills for risk-based approaches to disease control:

Trade in livestock and livestock products demand a sound disease control mechanism and practices that will eliminate risks of disease transmission. Risk- based disease control approach as outlined in the Terrestrial Animal Health Code (OIE 2011) is the strategy of choice and needs to be embedded in the disease control policy framework. The components of the risk analysis approach include risk identification, risk assessment, risk management and risk communication. However, to ensure implementation it would be important to address the issue of capacity building, both in public and private sectors. A well-designed training programme in risk analysis is essential.

Inadequate Disease diagnostic and surveillance infrastructure:

Effective disease control and surveillance, a basic requirement for a sustainable livestock health and production, requires the support of necessary functional infrastructure including laboratory, mobile laboratories, inspection posts, quarantine facilities, laboratory equipment etc. Information gathered indicates:

i. Laboratories facilities are inadequate, for instance Ethiopia has 9 regional and 2 Federal laboratories; Kenya – 1 National Central Laboratory, 1 Foot and Mouth Disease reference laboratory, 6 regional laboratories and a few satellite laboratories; district level laboratories are small outfits and poorly equipped;
ii. Inadequate laboratory quality and information management systems – only a few accredited veterinary laboratories in the region – for example, Ethiopia (2 Public labs – ISO 17025; Kenya (1 private lab – ISO 17025); Uganda -3 (public-2, private -1);
i. Laboratories are not well equipped and some of the equipment is obsolete;
ii. Equipment is not properly maintained and no maintenance schedules – no skilled staff for maintenance of the equipment;
iii. Out of date equipment in some cases– not up to date technologically;
iv. Inadequate skilled experts in the labs, and some of those well trained are not easy to retain due to better remuneration elsewhere;
v. Most Field Clinicians / private veterinary practices in the rural areas have no easy access to laboratory facilities and rarely use them for confirmation of diagnosis; disease reports are based on clinical symptoms and lack laboratory confirmation;
vi. Some Private laboratories are well managed but are very few – low private sector participation in the provision of laboratory facilities;
vii. Most of the laboratories are not accredited;

Based on the above information, and considering that laboratory capacity is one of the critical competencies that are evaluated under the '**Evaluation of Performance of Veterinary Services**' by OIE the policy focus should be:

- Resource mobilization for disease control and surveillance including improvement of laboratory facilities;
- Motivation of private and public practices to use laboratory facilities;
- Motivation for the private sector to invest in laboratory facilities;
- Public –private partnership in the operations of the existing laboratories;
- Laboratory Progress towards accreditation.

Gaps pertaining to the operationalization of 'one health' concept:

The justification for 'one health' concept has been well highlighted and articulated at the international level. International bodies, i.e. World Health Organization (WHO), the OIE and FAO, are working together to prevent and control health risks at the human-animal-ecosystems interface. They are developing global strategies and tools to ensure a consistent, harmonized approach throughout the world and to better coordinate human, veterinary and environmental health policies at the national and international levels). In IGAD Member States, the knowledge and awareness about one health concept is confined at the top layers of veterinary and health professional management. Though mentioned in some few policy documents:

i. little has been done to operationalize it;
ii. no elaborate advocacy framework developed;
iii. minimal public awareness and education.

The fight against zoonotic pathogens should be all-inclusive for effectiveness and better impact. Further, all-inclusive disease control and surveillance programmes based on one health concept stand a better chance for funding than '**animal health stand-alone'** programmes.

Inadequate assessment of the contribution and impact of veterinary interventions in the livestock sector
What is the impact or real contribution of Veterinary input in livestock sector? What would be the impact of 'zero veterinary input'? Animal health related policies and strategies do not provide for measurement of impacts or contribution of veterinary interventions, thus losing an opportunity to explicitly show case for investment. Studies on socio-economic impacts are rarely carried out; organized nation-wide disease monitoring and surveillance systems are inadequate; no organized national or regional surveys of endemic diseases to assess incidence or prevalence, evaluation of public veterinary programmes is rarely given due consideration and lessons learnt are hardly used to inform future programming. Figures and facts are generally inadequate and to some extent remain in the shelves of those who generate them. There is need to focus more in this area, and more importantly linking with international forums and experts to improve regional knowledge base on the issue. For instance – linkage and collaboration with International Society for Economics and Social Sciences of Animal Health (ISESSAH) could be useful.

Animal welfare: Inadequate Legislation, poor implementation of policies and poor compliance with regulations:

- Legal provisions on animal welfare are inadequate whereas the implementation of related policies is considerably weak. There is however some effort in the region to address both legal and policy animal welfare shortcomings (draft policy and legal documents exist – see examples below) but the matter is not given adequate priority.

THE ANIMAL PROTECTION BILL, 2015 (Kenya) - <u>Draft</u>
AN ACT of Parliament to provide for the protection and welfare of animals and prevention of ill treatment of animals (figure 4); to establish the National Animal Protection Authority; to provide for the monitoring of, and mitigation for animal abuse; to facilitate the promotion of awareness on the importance of animal protection and welfare to human livelihoods, to facilitate international trade, promote national heritage, wealth creation and for connected purposes
The draft Kenya veterinary policy (2013) contains positive statements on animal welfare:

'In collaboration with stakeholders, the government will ensure that animal rights are upheld and enforced in the animal resource industry. The government shall regulate Animal Welfare basing the measures on national guidelines and international standards to safeguard trade'

Additionally, IGAD Regional animal welfare strategy has been developed and validated and since then four Member States (Kenya, Ethiopia, Sudan and Somalia) have aligned their national animal welfare strategies to this regional strategy.

- Capacity and goodwill to enforce existing animal welfare regulations is inadequate – law enforcement agencies (such as police) have not shown keen interest or commitment to enforce animal welfare regulations, mainly due to the fact that they are inadequately enlightened about the relevant legal provisions there are indeed rampant cases of animal welfare violations but arrests are minimal, unless for a peculiar case such as bestiality;
- Capacity to coordinate and monitor animal welfare issues and to institute appropriate remedial measures is generally weak; existing animal welfare agencies are not well coordinated;
- Extension on animal welfare is weak, leading to public apathy on animal welfare - as illustrated below, there is lack of respect for the five animal freedoms (freedom from hunger and thirst; freedom

from discomfort; freedom from pain, injury or disease; freedom to express normal behaviour; and freedom from fear and distress);
- Inadequate communication, advocacy and awareness raising on animal welfare good practices.

Figure 5: A donkey with a piece of wood pushed through the septum

(courtesy of KVA/Brooke Donkey Project, Kajiado, Kenya)

The article below from a vet network helps to appreciate the scale or magnitude of low public awareness on animal welfare issues.

Uganda:
'Dear Members of the Noble vet profession,
'Yesterday on NBS TV 9:00 clock news, they showed a nasty scenario of the innocent piglets being carried in polythene sacks by some youths dressed in white t-shits fighting with the security guards and later release of coloured piglets that were inhumanly handled, kicked several times by security guard dressed in black, some trampled on, and likely to have died after the hassle.'
https://www.facebook.com/nbstelevision/videos/1126186904138940/

- Inadequate incorporation of animal welfare in school curriculum;
- Lack of understanding of the link between animal welfare, animal health, trade in livestock and livestock products, and public health.

Whereas it is the responsibility of the public sector to ensure compliance with the law, it is recognized that the private sector as well as the NGOs have important roles to play including advocacy and awareness creation.

Conflicting views on centralized Veterinary governance (and chain of command) versus devolved systems of government:

Constitutional reforms in majority of the IGAD Countries have led to devolved services including animal health services. The Local, Regional or County Governments (different nomenclature in different countries) have taken over the delivery of most of the animal health services and to a large extent delinking the Local Veterinary Services from the National Veterinary Authority, thus distorting the chain of command with regard to disease reporting and coordination. Chief Veterinary Officers who are the OIE Contact points do not have any supervisory authority over Local Veterinary Services, essentially making the link between the two levels of service delivery very weak. Cohesiveness in handling animal diseases from a national outlook is lost, as each local authority tends to act as a compartment without much interaction with its neighbour

or the National Government. Since this appears to be a common concern in the region, it would be desirable to develop regional policy guidelines on veterinary governance based on OIE standards.

Weak communication strategy and weak chain of command

For effective collaboration and cohesiveness of stakeholders in animal health service provision, a communication strategy is essential. This is lacking or inadequate in majority of IGAD Member States. Additionally, the chain of command that allows effective administration of Veterinary Services from grassroots to national level, and particularly the smooth flow of disease information from the livestock farmer or farm level to the Chief Veterinary Officer at the national level has significantly been weakened by structural changes in government and more so by devolved or federal system of governance. Examples include Kenya, Uganda and Ethiopia.

Inadequate feeding and weak regulatory framework on animal feeds and nutrition

In all the three countries visited, there was an overwhelming concern about livestock nutrition and regulation of commercial animal feeds: the concern centred around:

- Farm level – inadequate knowledge about animal nutrition and particularly how to maximize utilization of locally available materials;
- Legal framework on Commercial animal feeds –Apart from Ethiopia, all other Member States do not have sufficient legal framework. Additionally, capacity to ensure compliance with quality requirements is limited.
- Inadequate post marketing surveillance and monitoring of commercial feeds to ensure consistent quality and safety;
- Frequent Droughts –inadequate contingency plans in all Member States to deal with the situation of feed and water deficits during drought;
- In ASALs particularly: limited availability of fodder especially during dry season, poor quality of feeds / fodder during drought, deteriorating rangeland due to various factors including inadequate rangeland management policy.

Figure 6: A zero grazing unit in an ASAL area

Livestock kept under zero-grazing unit were healthy and in good body condition but with a production record of only 10 litres per day (figure 6). The owner's attribute the low milk production to poor quality commercial feeds she has been using.

There is therefore need for an improved policy and regulatory framework to address both animal feed safety and nutritional aspects (quality). The private sector is a key player in the manufacture, provision and supply of animal feeds but there must be checks and balances to ensure that livestock farmers get value for money.

Weak regulatory framework for Veterinary Drugs and Biologicals, and inadequate implementation capacity:

One challenge that has consistently been mentioned by many actors in the value chain is the entry of quacks or illegal service providers in animal health service, providing unprofessional services without due regard to proper use of drugs and without advising livestock owners appropriately about withdrawal periods pertaining to various drugs. Limited and erratic residue testing programmes in some countries have shown unacceptable levels of residues in meat and milk but the full extent of the problem has not been established. The unprofessional handling of veterinary drugs is also contributing to emergence of antimicrobial resistant pathogens with dire consequences on animal and human health. The main weak points include:

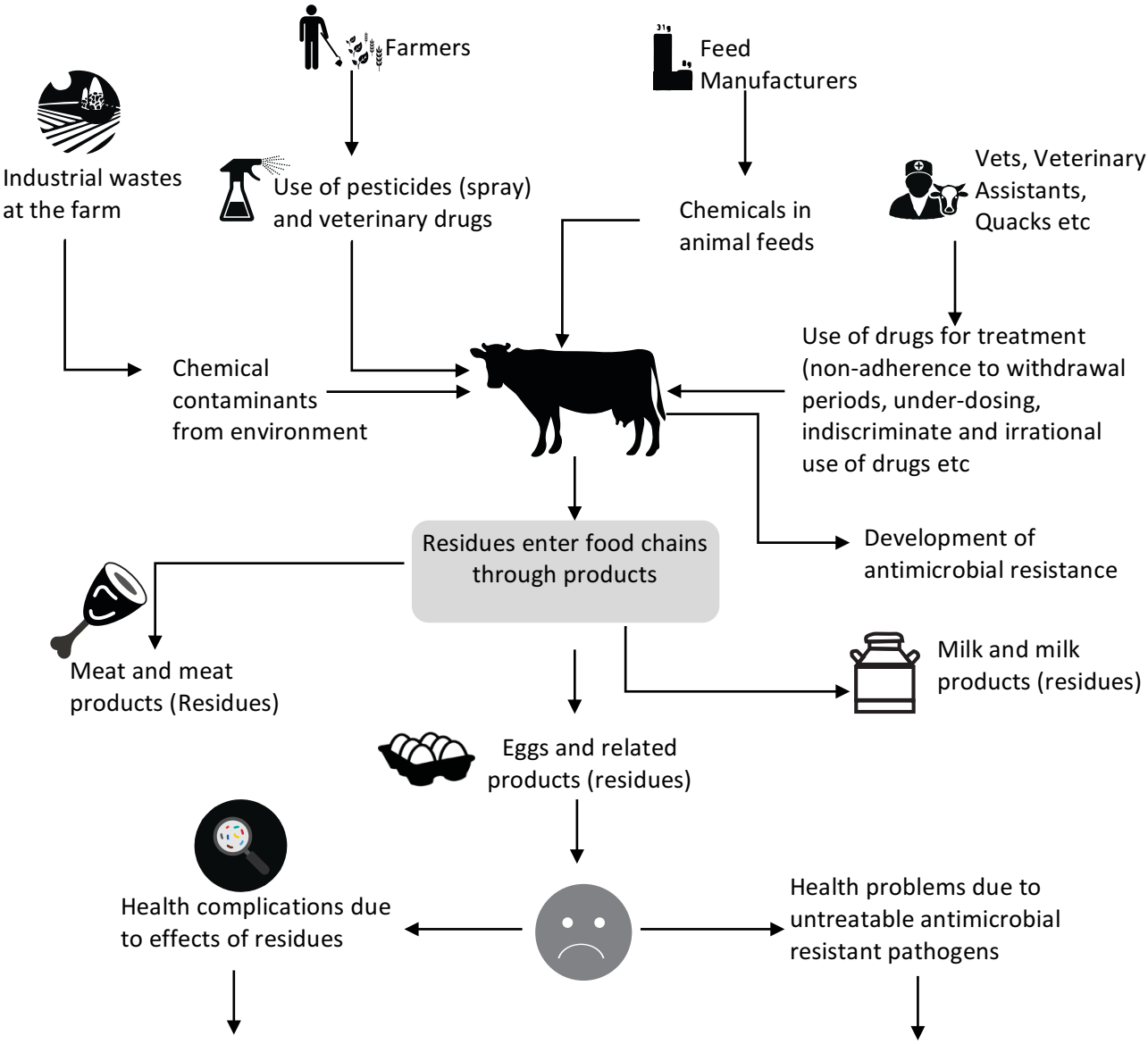
- Regulatory framework – In all the IGAD Member States, (with the exception of Ethiopia and Kenya) the control of Veterinary Medicines is not vested on Veterinary statutory authorities but mainly controlled by other statutory bodies with minimal focus on misuse and mishandling. In the three countries visited, the controlling authorities are as shown below:

Table 24: Control of drug supply line in IGAD Member States

Country	Controlling Authority
Kenya	Pharmacy and Poisons Board (Veterinary Medicines Directorate Council has recently been established to take over the control of Veterinary Medicinal Products)
Uganda	National Drugs Authority
Ethiopia	Veterinary Drug and Animal Feed Administration and Control Authority

- Inadequate capacity to implement regulations – inadequate human capacity and lack of necessary facilities, e.g. capacity to control and monitor drugs supply along the entire supply chain; inadequate equipment and facilities to test for residues and antimicrobial resistance.

Irrational, mishandling and misuse of veterinary drugs leading to residues and antimicrobial resistant pathogens is a recipe for disaster.



Low productivity, high mortality, high hospital bills, and misery; preventive measures must ensure:

- Appropriate legal framework for control of veterinary drugs;
- Enforcement of the law;
- Consumers' and farmers' education;
- Residue screening programmes plus appropriate actions.

A flow chart showing how drug residues are acquired by livestock and end up in the consumer

Figure 7: A flow chart showing how drug residues are acquired by livestock and end up in the consumer

Meat is one of the transmission vehicles for antimicrobial resistance (figure 7) – opportunity for antimicrobial resistance development arises when meat-containing residues (from indiscriminate use or misuse at farm level) is contaminated with pathogens from contamination during slaughter or post slaughter operations (S.Kariuki & others 2013).

The problem of antimicrobial resistant pathogens is found in some other parts of the world. One of the dailies in India (India Times) carried an article with the following heading:
'INDIA TODAY (March 18, 2013): YOUR ANTIBIOTIC IS SICK: India is losing the war on infections as bacteria defy powerful medicines'. The same article indicated that:

- ✓ 30% infants die in India each year from germs that do not respond to antibiotics;

95% rise in pneumonia, blood and wound infections in last 10 years in India can't be cured by last-resort drugs.

With the above information, it is of great importance and significance that control of veterinary drugs be given high priority in the IGAD Region.

Inadequate participation of livestock farmers and farmers' organizations in animal health service delivery
Participation of livestock farmers and farmers' organizations in animal health service delivery is an essential integral part of overall animal health service delivery strategy. However, in IGAD countries farmers have limited capacity in terms of knowledge, attitude and technology. Ability to seek and pay for professional animal health services is generally low. Participation in policy development is considered generally weak. Further, farmers' capacity to transform livestock keeping from subsistence level to commercially oriented enterprises is limited due to inadequate entrepreneurship skills. Farmers' organizations are equally handicapped – inadequate management and governance skills, limited ability to mobilize resources, inadequate transparency and accountability and weak networks.

Inadequate motivation for innovation

In the face of many challenges, especially in ASALs, animal health service delivery demands innovative ideas. Innovative ideas should be encouraged at all stages and levels of animal health service delivery value chain. For instance, the 'community animal health worker system' was an innovative idea, and so is the idea of "transforming subsistence livestock keepers into industrial livestock farmers" by the College of Veterinary Medicine, Animal Resources and Biosecurity (COVAB) of Makerere University. The promotion of innovation could include creation of an innovation platform, the introduction of awards for innovation, innovative research, etc.

Professional Associations are better placed to promote innovations in animal health service – calling for innovative oriented presentations during annual scientific conferences as well as creating awards for innovative ideas. In support of this, one of the strategic objectives of Uganda Veterinary Association is: 'to support innovations and development in animal related enterprises and industry'. Kenya Veterinary Association has the 'Vet of the Year Awards' (an annual event) but does not include an award for innovation in animal health service delivery. A regional innovation platform could also be useful to enable wider sharing of innovative ideas.

Inadequate public-sector resource allocation:

Resources allocated to animal health services are hardly enough to meet the requirements as stipulated within the OIE 'Evaluation of Performance of Veterinary Services' guidelines (table 25). Rough estimates from CVOs of the Countries visited indicate that on the average, the allocated financial resources to animal health services are meeting 25% to 50 % of the requirements.

Table 25: The extent to which animal Resource allocations meet requirements: opinion of key informants

Uganda	**25 to 50%**
Ethiopia	50 to 60%
Ethiopia Institute of Agricultural Research	20 to 30%
University of Addis Ababa (Faculty of Veterinary Medicine)	Up to 50%
South Sudan	0 to 25%
Somalia	26 to 50%
Kenya	0 to 25%
Sudan	26 to 50%

Between 2009 and 2011, some IGAD countries including Kenya, Uganda, Sudan and Ethiopia requested for OIE evaluation and indeed the findings are indicative of almost similar resource gaps. Expenditures for National Disease Prevention Systems (NPS) per veterinary livestock unit (VLU) are also pointing the same direction – expenditures on NPS /VLU in Uganda (low-income country) is below 2 dollars whereas that of Costa Rica (upper Middle-income Country) is above 8 dollars (OIE 2012). In both cases donor programmes are excluded.

Resource gap (in all Member States) is largely due to inadequate animal health investment plans and incentives, inadequately articulated impacts of animal health interventions, inadequate lobbying and advocacy, and competing national priorities.

Weak implementation of policies, legislations and regulations, and low compliance by stakeholders

This is a common policy gap in all IGAD Member States. It is attributed to various factors, mainly inadequate capacity and goodwill from governments; inadequate implementation strategies; inadequate participation of stakeholders; limited financial resources, and inadequate commitment by Member States. Low compliance by stakeholders is also attributed to inadequate advocacy and limited awareness creation.

Weak Control of veterinary profession and inadequate continuing professional education

The OIE Evaluation of veterinary services in several countries in the IGAD Region highlights absence of or weak veterinary statutory boards as the main cause of weak control of veterinary profession and inadequate continuing education. More specifically, the limited authority and capacity of the veterinary statutory boards are the major contributing factors.

12.Regional framework: roles, policy gaps and proposed actions

PUBLIC SECTOR (Table 26)

Table 26: The Role of the Public Sector in AHS, policy gaps and proposed actions

ROLES	GAPS	PROPOSED ACTIONS
Regional and cross border harmonization of policies and standards	Inadequate harmonization of animal health policies in the region;	Harmonize animal health policies within IGAD Region, and in particular align national animal health strategies to the already validated Regional Animal Health Strategy
Provision of resources and facilitation of investment in AHS	Resource gap (in all Member States): inadequate investment in animal health services, partly due to - Lack of National animal health investment plans; weak reflection on impacts of animal health interventions; lack of or inadequate investment incentives; inadequate lobbying, hence low national budgetary allocation.	• Develop better tools for lobbying and attracting investments – national animal health investment plans; inter-sectoral programmes; generate data on impacts of animal health interventions (or lack of them) on livelihoods and economy; • Mobilize resources from NGOs, private sector and other stakeholders; • Promote and support public –private partnerships; • Advocacy framework, based on evidence.
Development of policies and implementation strategy (Public role with participation of stakeholders)	• Inadequate policy guidelines and strategies and weak implementation: private partnership in disease control and surveillance; • innovativeness in AHS; • data and information management; animal welfare; collaboration, consultations and linkages among institutions and stakeholders; • veterinary governance; • livestock emergencies. • weak monitoring of policy implementation.	• Strengthen / develop relevant policies (Member States); • Develop realistic implementation framework and strategies with participation of key players to enhance ownership and implementation commitment; • Provide for monitoring and evaluation in the policy framework.

ROLES	GAPS	PROPOSED ACTIONS
Development and implementation of animal welfare policy	• Inadequate animal welfare policies and strategies in some Member States; • weak implementation of policies.	Develop or strengthen national animal welfare policies and strategies; • Align all national animal welfare policies and strategies to the already developed and validated Regional Animal Welfare Strategy (Ethiopia, Kenya, Sudan and Somalia have so far aligned their national animal welfare strategies to the regional one); • Develop viable implementation strategies.
Legislation and enforcement	• Weak implementation / enforcement of legislations and regulations, and low compliance by stakeholders – • inadequate capacity and goodwill; lack of effective strategies; inadequate participation of stakeholders; • limited financial resources.	Develop mechanism for improved enforcement of regulations – • involvement and participation of stakeholders; regular dialogue with law enforcement agencies; • advocacy and lobby for increased resource allocation; • Public education and awareness creation; • Strengthen legislation where necessary.
Support to private sector – e.g. establishment of affordable credit facilities, cushioning livestock farmers against disasters; low taxation on inputs, contracts etc)	• Weak private sector, especially in ASAL areas leading to poor and low-quality animal health service delivery; • Lack of public –private partnership framework, including legal support.	• Develop a public –private partnership framework that allows better engagement of private sector in animal health service delivery; • Establish a regional public – private policy dialogue platform; • Put in place legal measures to support PPP; • Establish affordable credit and insurance schemes to support private sector as well as livestock owners.
Inspection and certification of live animals and animal products for both domestic and export market	Lack of harmonization of animal health and food safety requirements / standards in the region.	Harmonize animal health and food safety standards in the IGAD Region to facilitate trade.

ROLES	GAPS	PROPOSED ACTIONS
Regulation of the veterinary profession	• Weak Control of vet profession and inadequate continuing education: Regulatory Bodies not in place in some countries, e.g. Ethiopia, Somalia, South Sudan); • Weak capacity of the existing regulatory bodies –limited authority and capacity of the Boards, Emergence of illegal animal health service providers (quacks)	• Strengthen / establish regulatory bodies to regulate veterinary profession including both veterinary professionals and paraprofessionals, as well as other animal health service providers; • Develop code of ethics for all cadres.
Regulation of the supply and use of veterinary medicines and biologicals	• Weak regulatory framework for control of veterinary medicines and biologicals - poor control of drugs leading to misuse and abuse – resulting in residues in products and antimicrobial resistant pathogens; • Delayed registration of drugs; • Lack of harmonized registration protocols in the region.	• Enact or strengthen legislation that allows full control of veterinary drugs and other veterinary biological preparations by the Veterinary Regulatory Bodies; • Design and implement awareness and education programmes for livestock owners and consumers; • Harmonize drug registration protocols in the region; • Conduct residue and antimicrobial resistance testing programmes to determine magnitude of the problem to inform remedial strategies.
Control of TADs and other diseases of economic and public health importance	• Low resource allocations; • Regional standard methods and procedures developed by AU-IBAR and IGAD, but weak follow up; • Weak participation of the private sector; • Inadequate adoption and promotion of 'one health' approach; • Low adoption of risk-based approach in disease control.	• Design bankable programmes to attract funding; • Develop livestock master plans or animal health investment plans to attract investment; • Promote adoption of 'one health' and risk-based approaches to disease control in the region.
Development of disease control and surveillance infrastructure (laboratories and quarantine facilities)	• Inspection and Quarantine facilities not adequate; • Existing laboratory facilities not well maintained and lack modern technology – obsolete equipment in some cases; • inadequate laboratory information management system and sharing.	• Encourage private sector to invest in laboratory facilities; • Explore possibility of PPP in management of public laboratories and quarantine stations; • Lobby governments for better funding of laboratory operations, especially in ASAL areas; • Design regional assistance programmes (with built-in sustainability measures) for possible external support; • Strengthen laboratory information management system.

ROLES	GAPS	PROPOSED ACTIONS
Coordination of cross border disease control activities	Inadequate coordination and harmonization of disease control activities in cross border areas;	Develop coordination and harmonization mechanism for cross border disease control and surveillance activities (build on existing Memorandum of Understanding -MoUs)
Disease reporting to international bodies, particularly to OIE	Delayed or under-reporting due to distorted chain of command resulting from devolved system of government – Veterinary authorities at national level losing control over lower veterinary services	• Develop regional and national policy guidelines on Veterinary governance to guide and inform devolved systems; • Appropriate legislation to support chain of command structures.
Livestock movement control including cross border movement	Weak enforcement of livestock movement within countries; Cross border livestock movement extremely difficult to control (porous border, and same people across the borders)	• Establish regular consultative forum for all enforcement agencies within each country; • Harmonize cross border disease control and surveillance activities.
Control of disease vectors such as tsetse fly	Inadequate regional control programmes; Weak participation of the private sector.	Step up regional initiatives for tsetse control; Carry out surveys to determine effect of climate change (common phenomena in IGAD region) on tsetse infestation; Explore ways of enhancing the role of private sector and NGOs especially in community mobilization and awareness campaigns.
Development of LITS and mechanism for implementation	Lack of promotion and low buy-in; Lack of supporting legislation;	Promote LITS in the region (awareness creation, advocacy and up scaling); Develop or strengthen National legislation tools to support implementation of LITS;
Delivery of veterinary extension service	• Weak strategy for veterinary extension service delivery; • Poor linkage and interaction between livestock keepers and public veterinary extension agents; • Livestock keeping mainly for subsistence.	1. Develop an overall veterinary extension service delivery strategy that incorporates the roles and strengths of various players – public, private, NGOs, livestock owners etc (make use of available human resources in ASAL areas including CAHWs); 2. Collaborate with institutions of higher learning in designing extension delivery models-their input is essential.

ROLES	GAPS	PROPOSED ACTIONS
Development of communication strategy and facilitation of institutional linkages and collaboration	3. Weak communication strategy; weak institutional linkages and collaboration; and 4. weak chain of command (majority of Member of States)	5. Establish a platform or consultative forum for key stakeholders in animal health; 6. Develop communication strategy to facilitate information sharing and management; 7. Develop legislation to support stability of veterinary structure; 8. Strengthen and promote inter-institutional linkages and collaborations;
Establishment of adequate database and information management system	9. Poor database and weak information management systems; 10. Lack of accurate data (e.g. livestock data) for planning purposes; 11. Inadequate socio-economic data on impacts of diseases, and veterinary interventions.	12. Establish credible database; 13. Design and roll out database and information management training programmes; 14. Conduct surveys on socio-economic impacts of animal diseases and veterinary interventions.
Production of vaccines	15. Inadequate capacity to meet demand; 16. Not up to date with modern technology in terms of equipment; 17. Inadequate management and technical competence.	18. Determine actual requirements for production planning purposes; 19. Lobby government for more resources to help in updating technology; 20. Explore possibility of PPP.
Production and conservation of animal genetic materials including semen, and improvement of animal breeding.	21. Inadequate capacity to meet semen demand – quantity and quality; 22. Focused mainly on bull semen-minimal diversification; 23. No breeding programmes in ASAL areas unless small pilot programmes by NGOs.	24. Establish National semen demand, and plan for appropriate expansion; 25. Capacity building to improve expertise and technology adoption (e.g. sex semen technology); 26. Collaborate with NGOs (such as Neighbours Initiative Alliance – NIA) and other agencies involved in livestock breeding to upscale successful breeding models in ASAL areas.
Control of importation - vaccines, semen, live animals and other biological materials	Lack of harmonized procedures and standards in the region	Harmonize control procedures and standards in the region;

ROLES	GAPS	PROPOSED ACTIONS
Animal feeds: access, quality and safety	i. inadequate feeds for animals; ii.Inadequate capacity to monitor quality of feeds; iii. Weak regulatory framework.	• Develop or strengthen regulatory framework, encompassing access, quality and safety aspects; • Establish a mechanism for compliance, monitoring and enforcement; • Make full use of the regional feed and range platform developed for IGAD Member States;
Training of animal health service providers	• Lack of harmonized training curriculum in the region; • Weak in wildlife veterinary medicine.	• Harmonize training curriculum in the region; • Incorporate more of wildlife veterinary medicine and animal welfare into the veterinary training curriculum.
Animal health research	• Inadequate resources for animal health research; • Not highly prioritized within National Agricultural Research Organizations; • Poor dissemination of research findings.	• Prepare viable and bankable research proposals targeting ASAL areas; • incorporate 'one health approach' in the research agenda; • Promote private sector participation in animal health research; • Carry out surveys on socio-economic impacts of livestock diseases to enrich animal health database; • Lobby national livestock research organizations to uplift priority.
Response to livestock emergencies including disease outbreaks	• Inadequate capacity for early detection, decision making and response to livestock emergencies; • Lack of clear policy guidelines on livestock related emergencies;	• Establish a regional coordination unit for livestock emergencies; • At national level – establish a National Livestock Emergency Response Unit or equivalent; • Develop clear policy guidelines on livestock related emergencies including disease outbreaks.
Delivery of 'private goods' services such as clinical services, tick control and artificial insemination service (for instance Ethiopia)	• Lack of clear policy on privatization (weak privatization policy; • Lack of veterinary regulatory board to control the profession.	• Develop clear policy guidelines on privatization; • Support private sector for eventual take over; • Establish or strengthen veterinary statutory boards to regulate the profession.

PRIVATE SECTOR (Table 27)

Table 27: The Role of the Private Sector in AHS, policy gaps and proposed action

ROLES	GAPS	ACTIONS REQUIRED
Manufacture, distribution, supply and sale of veterinary drugs and other inputs	Lack of interactive forum with Veterinary Authorities.	Chief Veterinary Officers to establish avenues for interaction with all key players in animal health service delivery on a regular basis.
Production of vaccines and semen (currently under the responsibility of the public-sector due to high cost of investment and weak private sector)	Inadequate capacity of the private sector – incapable of undertaking huge private goods tasks/ investments such as production of vaccines and semen.	Develop long term strategy to facilitate eventual take over by the private sector.
Provision of clinical services – diagnosis, treatment and submission of regular reports	• High cost of professional animal health service delivery in ASALs – not attractive to private sector; • Poor diagnostic facilities such as laboratories; • Weak referral system; • Lack of regular reports to Veterinary authorities; • weak private sector in ASALs.	• Lobby for training of more Veterinarians and paraprofessionals from pastoralist / ASAL areas; • Under the coordination of Chief Veterinary officers – initiate regular dialogue between Veterinary professional associations and veterinary paraprofessional associations to review referral system and submission of reports by the private sector; • Strengthen legislation to improve referral system and reports submission by the private sector.
Delivery of artificial insemination services	• Low adoption of artificial insemination technology in some areas; • Weak monitoring of artificial insemination service delivery; • Service not available in ASAL areas.	• Design and implement awareness creation and promotional programmes in artificial insemination potential areas; • Design workable monitoring and reporting system to enable capture of data at a central database point.
Compliance with law and regulations	Poor education and awareness about legislation leading to poor self-regulation and compliance.	Design and implement awareness creation Programs among all animal health service providers – continuous professional development training programmes on legislation and policy could be useful.

ROLES	GAPS	PROPOSED ACTIONS
Control of TADs (contractual arrangement with Government)	Minimal participation of the private sector.	• Engage private sector in control of TADs on contractual arrangement as a policy direction; • Professional and paraprofessional associations to lobby governments for better engagement of private sector in the control of TADs;
Control of endemic diseases – vaccination against some diseases such as Newcastle Disease and other poultry diseases, as well as local certification of live animals for special purposes and on demand – e.g. for breeding purposes	Poor linkage with Veterinary Authorities – do not provide vaccination reports to National Veterinary Authorities.	• Chief Veterinary Officers to provide policy guidelines and modalities on linkage with private sector for better capture of data centrally; • Enhance legal provisions to allow capture of disease control data centrally.
Disease reporting (TADs)	• Unwillingness to report or collect samples for fear of involvement without compensation for the time spent; • Weak disease reporting linkage between private sector and Chief Veterinary Officer; • weak chain of command.	• Provide incentive mechanism to enhance private sector participation in disease reporting (TADs) – certificate of appreciation, an award scheme, recognition scheme, designing reporting format jointly etc.; • Chief Veterinary Officers to establish regular consultative meeting with private sector to enhance cooperation and compliance; • Strengthen legislation for effective chain of command.
Control of disease vectors – ticks	• No clear policy on tick control; • Collapse of tick control following handing over of dips to beneficiaries under Structural Adjustment Programmes (Kenya is a good example)	• Provide clear policy guidelines on tick control; • Establish an effective mechanism for monitoring incidences of tick borne diseases and acaricide resistance.
Training of animal health service providers (certificate, diploma and degree level)	• minimal participation by the private sector - Only a few private veterinary training colleges are able to comply with requirements (so far, none is producing veterinarians).	• Regulatory bodies to ensure compliance with OIE recommendations on the competencies of graduating veterinarians (day 1 graduates); • Promote and support private sector participation in training of animal health service providers.

ROLES	GAPS	PROPOSED ACTIONS
Animal welfare	• Low compliance with animal welfare regulations – general public not well informed about animal welfare issues such as '5 animal freedoms'.	• Design and implement awareness creation among animal health service providers; • Design programmes to promote animal welfare alongside animal health (NGOs are well positioned to participate).
Disease control facilities such as laboratories (if economically viable)	Lack of private investment in disease control facilities (the one known private laboratory in Nairobi –ANALABS-is in good operational status).	Conduct a survey to determine the actual demand for laboratory services, willingness to pay for the services, and viability - this will enable the private sector to make an informed choice.
Veterinary extension including facilitation of information, knowledge and experience sharing	Not well integrated in the overall Veterinary extension strategy.	Incorporate the roles of private sector in the overall veterinary extension service delivery strategy, to make sure that all the players are providing the service in harmony and complimenting each other.
Development, Manufacture, distribution, supply and sale of animal feeds	• Weak regulatory framework and weak capacity to monitor or enforce, leading to non-compliance with standards; • Limited to high potential areas, mainly in dairy farming areas; • Inadequate development of animal feeds in ASAL areas	• Strengthen the policy framework on animal feeds and nutrition, taking into account the unique challenges in ASAL areas (frequent droughts and low rainfall); • Develop / strengthen regulatory framework and the capacity to enforce the regulations; • Support fodder development initiatives in ASAL Areas.
Policy advocacy	Weak networks – limited advocacy capacity.	• Strengthen Associations such as professional and paraprofessional associations in terms of advocacy and governance training (capacity building); • Support formation of viable networks to improve capacity for lobbying and negotiations; • Develop regional advocacy framework.

ROLES	GAPS	PROPOSED ACTIONS
Development of innovative models in animal health service delivery, extension service and research	• Inadequate innovative models in animal health service delivery; • No formal avenues through which innovative ideas can be harnessed.	• Support development of innovative models in animal health service delivery, extension service and research; • Encourage animal health professionals and paraprofessionals to develop innovative models to address animal health challenges in livestock sector.
Participation of livestock farmers in animal health service delivery including participation in policy development	• Weak participation in policy and legal development; • Inadequate participation in animal health service delivery (e.g. disease control and management); • Limited access to knowledge and technology;	• Educate farmers and farmers' organizations on how to effectively participate in policy and legal formulation; • Develop guidelines for farmers and farmers' organizations on their roles and participation in policy development and in animal health service delivery in general; • Support establishment / strengthening of farmers' Organizations and networks (nationally and regionally).

13. CONCLUSION

The animal health service delivery policy shift from the government dominated service delivery model towards privatization, liberalization and rationalization has grown deep roots and despite many challenges. It is still on course but at different levels in different countries depending on prevailing circumstances. Within the privatization framework, the public sector, private sector as well as NGOs and livestock owners have crucial roles to play. However, there is need for improved policy and enabling legal environment to facilitate effective and efficient animal health service delivery by both public and private sector.

The private sector has the potential to play a greater role in service delivery so as to transform the subsistence livestock keeping into more viable and commercially oriented enterprises leading to improved livelihoods and socio-economic development. It is therefore of paramount importance to pay more attention towards supporting and facilitating the private sector to enable it take its rightful position in the delivery of animal health services. This notwithstanding, complete privatization of animal health service delivery in the immediate future is not foreseeable, and is not recommended neither is it feasible. Presence of Government in perceived 'private goods' areas such as vaccine and semen production are foreseeable, at least for the next 10 years. Equally therefore, the capacity of the public sector needs to be enhanced in order to deliver on its mandate. However, the most important point is the need for continued public-private sector dialogue, both in-country and regionally.

The recommendations in this review have placed immense responsibility in the hands of IGAD. This is in recognition of IGAD's important role of coordination, facilitation and support. Additionally, IGAD has the capacity to harness and influence external support from both governments and development partners and agencies. It is expected that IGAD will solicit support and collaboration of other Organizations such as AU-IBAR, African Development Bank, FAO to be able to implement the recommendations.

It is finally concluded that the regional context in terms of politics, climate change and development is highly complex and dynamic. Policies and regulations governing the roles of both public and private sectors in animal health service delivery, and the performance of the respective players, are all amenable to contextual changes. Hence the need for pragmatic monitoring to inform implementation processes.

14.RECOMMENDATIONS

Veterinary education and continuing education

i. Regional animal health service providers, whether private or public, play an important role in regional livestock trade – disease diagnosis, surveillance, inspection and certification of animals and products etc. It is of critical importance that these service providers have knowledge and skills equal to the tasks they perform irrespective of the countries they are working in. It is therefore recommended that:

IGAD:

ii. Supports harmonization of veterinary training curriculum in the region with a view to ensuring:
   i. Equal or equivalent level of training;
   ii. Recognition of animal health related certification among Member States;
   iii. Mutual recognition of animal health professional services among Member States.

iii. Enhancement of veterinary knowledge in Wildlife: In view of the importance of wildlife in the economy of some IGAD Countries, and their role in disease transmission, it is considered necessary to enhance veterinary knowledge and skills in wildlife. In this regard, it is recommended that IGAD supports Member States to improve Veterinary education through better integration of Wildlife knowledge in veterinary school curriculum.

Member States:

iv. Promote continuing professional veterinary education through:
   - Setting of professional guidelines and standards to be adhered to (legislation is essential)
   - Code of ethics for veterinary professionals and veterinary paraprofessionals
   - Development of regular refresher training programmes for veterinary professionals and paraprofessionals; monitor and evaluate such training programmes to ensure relevance and impact.

Disease control and livestock trade

The rising population in the region creates demand for livestock products, thus providing an opportunity and potential for regional trade in livestock and livestock products. Improved disease control and surveillance in the region will contribute to unlocking this potential. Based on this premise, it is recommended that:

IGAD

i. In consideration of risks associated with cross border livestock movement, IGAD in collaboration with Member States, and with involvement of key stakeholders, finalize the ongoing bilateral and multilateral MOUs/ agreements), for cross border coordination and harmonization of disease control and surveillance; and further support Member States to develop necessary capacity for cross border disease prevention, control and surveillance

ii. IGAD in collaboration with AU-IBAR and other interest parties continues to support enhancement of regional capacity on disease control and surveillance infrastructure, including laboratories and quarantine facilities;

iii. IGAD supports Member States to establish / strengthen laboratory information management system;

iv. It is further recommended that IGAD takes steps towards:

- Supporting Member States to align their national animal health policies and strategies to the Regional Animal Health Strategy: Development of mutual recognition agreements on animal health and food safety requirements among Member States;
- Supports and encourage Member States to share disease information more prudently.

Member States:

v. Encourage private sector to strengthen their diagnostic work through use of laboratory facilities;
vi. Take pro-active action to engage private sector players in disease prevention, control and surveillance - dialogue with private sector players to develop modalities of engagement and participation;
vii. Align their national animal health policies to the already developed and validated regional animal health strategy.

Information management system

Adequate information management system is a useful tool in planning and communication. IGAD Member States are in dire need of adequate and well managed database – disease mapping (incidences and prevalence), livestock numbers, disease monitoring data, socio-economic impacts, vaccination and treatment data, human resource data, data related to livestock trade etc. In order to assist Member States, build credible animal health related information management system it is recommended that:

IGAD:

i. Supports Epidemiology and Data Management Units in Member States to build or establish credible livestock / animal health information management systems, well linked internally and externally to facilitate efficient information sharing.
ii. Capacitate /Facilitate Member States to conduct studies on socio-economic impacts of priority diseases - generate hard facts and figures to inform policy makers and other interest parties;

Member States:

iii. To establish and implement sound animal health management systems to facilitate more efficient and effective sharing of information

One Health Approach

There is no dispute about the merit of 'One Health approach' in the control of animal diseases (Zoonotic diseases in particular) and other bio-threats originating from animals. There is some awareness about the approach in the region and some effort in incorporating it in the policy documents. However, the applicability is still low. To take up the concept to a higher level of awareness and applicability, it is recommended:

IGAD:

- Develop a regional framework for the promotion and applicability of 'One Health approach', and support Member States to adopt the approach.
- As a pilot, IGAD should consider supporting one disease control or surveillance programme (e.g. Brucellosis) that incorporates 'One Health approach' – a regional 'one health project' for IGAD Member States would be useful.

Member States:

- It is acknowledged that some IGAD Member States including Uganda and Kenya have made some progress in embracing one health concept through establishment of inter-ministerial units (mainly involving ministries responsible for health and animal resources) to address major zoonotic diseases. In line with this progress, it is recommended that:

- Each IGAD Member State develops a national framework for the actualization of 'one health 'concept. Such a framework should include both public and private sectors and covering all layers of governance and decision-making.

Regulation of veterinary drugs, and related issues

In view of the rising cases of drug residues (and trade implications) and antimicrobial resistant pathogens, and considering inadequate information on the magnitude of the problem in the region (limited data available), it is recommended that IGAD and Member States:

IGAD:

i. Support capacity building in drug residue and antimicrobial resistance testing (provision of testing equipment and training on testing procedures);
ii. Facilitate Member States to develop drug residue testing programmes to establish the magnitude of the problem (regional or in-country programmes), to form the basis for remedial measures;

Member States:

iii. Establish / strengthen relevant regulatory bodies (e.g. Veterinary Drugs Inspectorate Units, Veterinary Boards, etc) including development of appropriate legislation in countries where such legislation is lacking; capacity and authority of such regulatory bodies should be given due attention;
iv. Develop training/ awareness programmes to inform stakeholders including animal health service providers, livestock farmers, pastoralists, and consumers.

Animal feeds and nutrition regulatory framework

i. **IGAD:** Facilitate Member States to develop animal feeds and nutrition policy and regulatory framework, implementation strategy and build the necessary capacity to implement the regulations; the policy framework should provide adequate space for private sector investment in animal feed production and supply; further, the policy framework should embrace total feed safety system that does not compromise animal health, environmental integrity, or safety of food for human consumption;
ii. **Member States:** make full use of the regional feed and range platform established by IGAD to enhance sharing of lessons learnt, experiences and information.

Innovation in animal health service provision

Veterinary schools and veterinary professional and paraprofessional associations are prime grounds for initiating innovations in animal health service delivery. They should be encouraged to create innovation platforms at national levels through which interested parties can channel innovative ideas for possible support. In support of this it is recommended that:

IGAD:

- Support and promote innovative research in the region; and further supports Member States to develop innovative models; and to share experiences and information;
- Support 'Animal Health Innovation Day' (AHID) in the region (a learning institution can be the venue)- an opportunity to display innovative exhibitions, models, and presentations from various animal health sector players;

Member States:

- Establish innovation platforms and schemes – to encourage participation of professionals and paraprofessionals, and other stakeholders;
- Invest in research and innovation and coordinate /network among research centres

Regional Livestock identification and traceability system (LITS)

Effective rolling out of LITS in the region will require the support and cooperation of all key stakeholders including livestock owners, livestock traders, abattoir operators and public institutions among others. It is recommended that IGAD and Member States support the rolling out process within the region:

IGAD:

- Continue to support harmonization of LITS strategies in the region and sharing of experiences and lessons learnt among Member States;
- Roles out the developed.

IGAD MODEL LEGAL FRAMEWORK FOR LIVESTOCK IDENTIFICATION AND TRACEABILITY SYSTEM (LITS)

Member States:

- Develop national LITS Strategy (together with implementation framework) in line with the Regional one;
- Awareness creation among the stakeholders (buy-in process)
- Development of an appropriate legislation.

Empowering private sector

If empowered appropriately, the private animal health sector players have the potential to contribute more significantly to the supply and provision of animal health services. In this regard, it is recommended that:

IGAD:

- Supports the strengthening or establishment of sustainable regional or national based private sector alliances, networks, associations, credit societies, etc.

Member States:

- Takes affirmative action to include private sector players in capacity building programmes such as training and experience gathering / exposure missions and tours;
- Regulatory bodies such as Veterinary Boards or Councils to hold regular consultations with the private sector players so as to enhance dialogue and smooth flow of communication and information.

Public – private partnership in animal health service delivery:

Public – private partnership may involve joint investment by both private and public sectors, or engagement of private sector by Government to deliver certain services, or support of the private sector by the Government in one way or another. Either way, the rules of engagement must be in place. Tenable recommendations include:

IGAD:

- Support Member States to develop a public –private partnership framework including legislation to guide the process of engagement (Kenya has developed a general regulatory framework for PPPs – The Public Private Partnership Act, 2013;
- Opportunities for investment: Support feasibility studies for establishment of commercial feedlot systems in some potential semi-arid areas, and share findings with private sector players who may wish to invest in those ventures. Feasibility studies are just meant to bring into light potential investment opportunities;

Member States:

- Lobby the governments to support the private sector – establishment of friendly credit facilities, engaging private sector to deliver certain public animal health services (accreditation/authorization/delegation), duty free on essential veterinary equipment etc.
- Identify potential areas for public-private partnership, share with private sector players and develop a roadmap for implementation;

Veterinary extension service delivery

Transforming subsistence livestock farming into commercially oriented enterprises has been the dream of many development agencies. The Makerere University in Uganda is running a community-based programme aiming at transforming subsistence livestock farmers into industrial livestock farmers through entrepreneurship training programmes at the community level. The Initiative needs support and up scaling. It is therefore recommended that:

IGAD:

- Collaborates with Makerere University to monitor the progress and eventual impacts of the Livestock farmers' transformation programme with a view to up scaling the initiative to cover other parts of the region;
- Supports capacity building of key players along animal products /by-products value chains, particularly meat and milk value chains- specifically training programmes on 'Good Hygiene and Husbandry Practices' – from farm to consumption. This will improve safety standards of the products, and hence facilitate trade in livestock products and by-products.

Member States:

- Develop an all-inclusive strategy for animal health extension service delivery – incorporating public, private sector players, NGOs and Community-based Organizations, and livestock farmers

Resource mobilization

Huge Resource gap is one of the key limiting factors in animal health service delivery, especially by the public sector. All the public-sector stakeholders consulted lamented the low budgetary provisions not only in animal health service delivery but in the whole of livestock sector. In order to reduce the gap, it is recommended that:

IGAD:

- Supports Member States to develop a road map for the livestock sector, 'Livestock Development Mega Plan' to attract investments. Such a road map should be anchored on value chain analysis highlighting investment opportunities, possible areas of public-private partnership and areas requiring external support among others;
    - (Note: Ethiopia has developed a livestock master plan);

- Encourage and Support member states to develop: Effective tools for lobbying government and private sector to increase resource allocation in animal health (e.g. development of comprehensive animal health investment plans and strategies for private sector engagement);

- Encourage Member States to develop 'bankable and viable' projects or programmes that show impacts on livelihoods and poverty reduction as they are likely to score highly in terms of support by Development partners; joint institutional or inter-sectoral programmes such as 'one health approach' programmes are equally bankable;

Member States:

- Enhance budgetary provisions: adopt an equivalent of 'commodity-based approach' in budget preparation, i.e. specific species of livestock and/or specific diseases, thus broadening the scope of budgetary provisions;

Policy guidelines on Veterinary governance and chain of command

Teething challenges on disease reporting and coordination of disease control and surveillance are emerging out of devolved systems of government with likelihood of negative impact on OIE compliance. To ensure Member States remain on course and within OIE compliance, it is recommended that:

IGAD:

i. Develops regional policy guidelines on veterinary governance to guide Veterinary Services in the face of challenges posed by devolved systems of government;
ii. Encourage Member States (Veterinary Authorities) to strengthen legislation with a view to ensuring:

- Functional linkages and collaboration between National Government and other levels of Government
- Effective coordination procedures between National level of Government and other levels in the control of TADs;
- Clear chain of command in matters related to disease reporting generally and disease emergencies in particular;

Member States:

iii. Develop / strengthen policy guidelines and legislation that will ensure stability of vet structure and proper functioning of chain of command; Livestock-based emergencies including disease outbreaks

IGAD:

i. Lobby for long term regional resilience programmes including pasture/fodder development and management, and establishment of more water facilities in ASAL areas;
ii. Support Member States to establish National Animal Disease Emergency Response Units (NADERU);

Member States:

iii. Encourage, promote and support good practices in emergency response: early detection and early warning systems, timely response, quality and accountability in identification and implementation of interventions, and monitoring & evaluation of interventions;

Institutional linkages and collaboration

Inadequate institutional linkages and collaboration are a hindrance to information and experience sharing, joint programmes as well as sharing of critical resources. To enhance institutional linkages, collaboration and consultation it is recommended that:

IGAD:

i. Support Member States to establish / strengthen collaborative forums to enhance sharing of information, ideas and joint programming.

Member States:

ii. Member states in collaboration with stakeholders to develop communication strategy – to enhance information sharing and management, stakeholder consultation and collaboration, and public awareness in general;

Inadequate adoption of Risk based approach

Disease control and food safety standards based on risk analysis principle is a good practice worldwide. The uptake in the region needs to be improved. It is therefore recommended that:

i. IGAD Promotes adoption of risk based approach in disease control and food safety in the region;
ii. Continue to Support capacity building (training) in risk analysis, involving both public and private sector players

Inadequate implementation of national policy and legal provisions for Animal welfare

In view of the growing pressure to incorporate animal welfare in the international standards governing trade in livestock and livestock products, and taking into account that IGAD has developed a regional Animal Welfare Strategy, it is recommended that:

IGAD

i. Encourage Member States, and where necessary facilitate them, to develop capacity for monitoring, implementation and evaluation of national animal welfare policies, strategies and legislation;
ii. Support Member States to align their animal welfare policies and strategies to the Regional Animal Welfare Strategy that has already been developed and validated;

Member States: promotion of animal welfare

i. Develop awareness programmes to inform stakeholders including general public;
ii. Strengthen policy and legislation on animal welfare (with participation of private sector players and other stakeholders);

Liaise with education sector and lobby for inclusion of animal welfare issues in school curriculum as a long-term measure to promote animal welfare;

Inadequate implementation of policies and legislation, and low stakeholder compliance

IGAD:

- Assist Member States to develop capacity and strategies for implementation, monitoring and evaluation of policies, legislation and regulations;

Member States:

- Develop awareness campaigns and communication or consultative avenues through which stakeholders are effectively informed and are able to provide feedback; engage law enforcement agencies including police and Judiciary constructively with a view to gaining their support and cooperation (refer to guidelines on enforcement of regulations.

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