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Strategic Action for Transforming Animal Health Services in Tigray Region

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1. BACKGROUND AND RATIONALE

Tigray region has 4.82 million cattle, 2.47 million sheep, 4.30 million goats, 6.19 million poultry, 886103 donkeys, 15664 horses, 11308 mules, 43332 camels and 293,184 beehives; which represents nearly 10% of livestock resources in Ethiopia (CSA, 2018). The livestock sector contributes a lot to the economy of the country, and is still promising to rally round the economic development through export earnings from live animals, hides, and skins to earn foreign exchanges to the country. Livestock products and byproducts provide animal protein needed for nutritional requirements of people. Draught animals provide power for the cultivation of the smallholdings and for crop threshing virtually all over the country and essential modes of transport to take holders and their families' long-distances, to convey their agricultural products to the market places and bring back their domestic necessities. Livestock as well confer a certain degree of security in times of crop failure, as they are a "near-cash" capital stock. Furthermore, livestock provides farmyard manure commonly applied to improve soil fertility and used as a source of energy, prestige, and wealth/accumulation.

Despite the large number of livestock in the region, the sector is characterized by low production and productivity and, hence, income derived from this sector could not impart significant role in the development of the region's economy.

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The low production and productivity is attributed to high disease incidence and parasite burden, limited knowledge on genetic potential of indigenous breeds, inadequate management, poor nutrition and reproductive performance. Among these constraints, diseases and nutrition have numerous influences on productivity and fertility of herds. The effect of livestock diseases could be expressed in terms of losses due to mortality and morbidity, weight loss, slow growth rate, poor fertility performance and decreased physical power. Moreover, limitations pertaining to institutional capacity in terms of human capacity (quantity and quality) and infrastructure/facility committed for livestock production affect the quality of the veterinary extension.

Unlocking the potential of livestock resource base requires strategic removal of these barriers. Animal health services are the major felt needs of the animal rearing communities. The Ethiopian government has developed Livestock Master Plan, a road map for improved productivity in meat, dairy, eggs and other livestock products. Furthermore, Animal health strategy and vision for Ethiopia developed in 2013GC. Towards the national goals, it is mandatory to cascade into regional programs in Tigray and contribute to the overall GDP of the country. The goal of this "*Strategic Action for Transforming Animal Health Services*" document is to consolidate concepts, best ideas, projects and learned lessons forwarded by the wide network of animal health professionals and experts at the Global Society of Tigrian Scholars (GSTS), both from the diaspora and within Ethiopia.

2. METHODOLOGY

Existing national and regional plans and documents were reviewed. In addition, lessons learned, experts' opinions and best practices of other countries such as South Africa and Zambia were also reviewed. The full document of this strategy has been presented in the 2nd GSTS conference held on 29 July 2019 and Annual Research Review Day of the College of Veterinary

Sciences, Mekelle University; where useful inputs were capitalized. The full strategic document is available in the GSTS office, TBoARD and with the authors; only a snap shot of the document is presented here.

3. EXITING CHALLENGES OF THE VETERINARY SERVICE IN THE REGION

Veterinary Clinics: Public veterinary clinics are responsible to perform all activities in animal health services including disease reporting, treatment and control of diseases (Tigray BoARD, 2010). Considering one animal health post for three peasant associations (Tabias), the region is expected to build 237 clinics. Currently, there are only 184 veterinary clinics (77.6%). However, only 29 (19.3%) satisfy the minimum classroom requirements of the region (six and above). In most of the clinics, there is limited supply of water, limited clinical equipment, electricity and internet facilities. In none of the established veterinary clinics can one conduct laboratory-based diagnosis of patients. On the existing structure, veterinary infrastructures are built mainly considering the rural farmers.

Human Resource: In most animal health clinics, there are 1-3 employed veterinary personnel. It has been proposed that 749 workforces are required to provide better service. Currently, there are 511 employees and their academic qualification is DVM and above (68, 11.8%), BSc in Animal Health (103), Animal Health Assistant (326) and Animal Health Technician (16). Through time, the number of animal health personnel deployed in the region shows improvement; even though continuous job shift is common. Each animal health staff has duplicates of expectation as either of Casher, Veterinary Pharmacist. Janitors, guardsmen and animal attendants are missing in each clinic. There is no clear job description for the various academic qualifications; on ground professionals are not engaged according to their specific job of various academic qualification. In general, veterinary workforce of the region is far below than the OIE standards both in quantity and quality requirements. Furthermore, ratio of veterinary staff to the Tropical Livestock Unit (TLU) is far below the standards.

Slaughterhouses and Meat Inspection Facility: Performance of the region in constructing slaughter houses/slabs is poor. So far, only 28 are operational in major towns of the different districts of the region. Unfortunately, there is also a competing interest particularly in inspection /regulatory/ part either if they belong to the district municipality or bureau of agriculture. In general, culture of meat inspection particularly for small ruminants' meat is poor. Access to electricity, water, other utilities and standard waste management system is very low. The Abergelle abattoir is the only standard export abattoir the region has. Unfortunately, its international operation is challenged by various factors; its current destination is for domestic use.

Diagnostic Laboratory*:* There is only one regional Veterinary Diagnostic Laboratory, mainly used for diagnosis of disease outbreak and limited research needs. However, the lab is constrained by unsuitable building, lack of inputs, power, water, and presence of limited old technologies and budgetary and job structure issues.

Quarantine and Border Control Post: Tigray region has only one Federal Quarantine Service constructed in Kafta-Humera district. It is merely physical infrastructure than fully functionality. Zalambessa and Mereb exit borders expected to have International control posts.

Veterinary Vaccines: Supply of vaccines is only from the National Veterinary Institute. Vaccination coverage of the region is far below the expectations. Major challenges are budget, lack of clear vaccination schedule and lack of necessary laws. Frequent power interruption affects vaccine storage. On the other hand, there is efficacy concern against pasteurellosis, Lumpy skin disease, New castle disease and Infectious bursal disease vaccines.

Drugs, Acaricides and Other Supplies: Procurement of veterinary drugs and biologicals is from private wholesalers and vendors on competitive bid. Unfortunately, the government purchase is challenged by budget deficits, long way of purchasing processes/biding lack of efficient suppliers and limited access to various types of inputs. In the region, there is no revolving fund system. Available products are of cheap brand with limited efficacy. In general, less than 10% of sick animals receive treatment indicating limited public veterinary practice (Mulugeta and Berhan, 2015). Most of therapeutic and control inputs have been used for long time, hence reports on development of drug resistance is increasing. Illegal trade of Veterinary drugs is increasing through the boarders.

Veterinary Governance Structure: In the region, the Animal Health Directorate is under the Sector of ***Animal and fish development sector*** of the Tigray

Bureau of Agriculture and Rural Development. Only one director, two team leaders and twelve expertise for both regional lab and field service are the governing body of the regional assignments. Except in Western and Mekelle zones, there is no zonal animal health administrative unit. In each district, there is one clinic coordinator. Each animal health clinic has 1-3, at least, diploma holder Animal Health Assistants. In any of the animal health clinics, there is no defined structure in terms of job description and level of academic qualification. The ***Veterinary Diagnostic Laboratory*** is regional and has no structure at district or zonal level. There is only ***one quarantine and meat inspection*** expert in the region. This structure is absent in district governance. No single slaughterhouse has defined structure in terms of job description and career development because of competing interests of municipality and TBoARD. Recently, the Ethiopian ***Veterinary Drugs and Feeds Administration and Control Authority*** (VDFACA) has opened its (sub) regional offices in Mekelle and Western Zone.

Policies and Strategies: In 2013, the country has developed Animal health strategy and vision. Implementation of existing laws is weak. On the other hand, Veterinary laws on control of animal diseases through vaccination, commodity based compartmentalization or zoning for major livestock areas, marketing and animal movement regulation, animal welfare, land lease policy for establishment of veterinary infrastructures, duty free and tax exemption opportunities, special access to foreign currency, compensation mechanisms and animal diseases and disaster prevention system are non-existent or limited. Furthermore, working documents on work ethics, incentive packages and hardship allowance, special access to finance credit, veterinary statuary and accreditation and vetro-legal framework are missing.

Private Veterinary Services: Regional authorization body and district level working committees govern Veterinary Privatization in the region, for permits related to Animal Health Clinics and Pharmacy. Whereas wholesalers are governed by regional branch of the Federal VDFACA. There is no national or regional laws/guideline to categorize public and private animal health goods/practices. Private animal health clinics and rural drug vendors are emerging in Mekelle, Mekhoni, Maychew, Aksum, Adigrat, Humera and Dansha. So far, the region has eight wholesalers, 120 pharmacies and 20 animal health clinics, owned by private. However, none of the private animal health clinics has standard facility, infrastructure (work in rented houses) and enough budgets. Private practitioners operate in some of the slaughterhouses but lack standard facilities and operative procedures. The government wing has weakness in regular monitoring to the established private clinics and drug dealers.

4. STRATEGIC OBJECTIVES AND ACTIONS

Improve Veterinary Governance through

- Strive to attain OIE standard of veterinary services pathway
- Improve disease reporting and proper communication systems
- Establish line management and coordination between district, zonal and federal veterinary services.
- Strengthen the legal framework:
- Strengthen livestock disease surveillance and information systems
- Develop rural and urban veterinary services
- Regulate the veterinary profession and uphold professional standards and ethics.

Improve Animal Health Service

- Improve efficiency and coverage of public clinical services
- Encourage the private sector to contribute in improving the primary animal health services.
- Control or eradicate livestock diseases of trade and livelihood importance
- Compartmentalization of Animal production and animal health packages
- Promote Animal Welfare
- Establish phased livestock identification and traceability system
- Improve early detection and response to emergencies
- Standardize the human workforce; make use of community animal health workers.

Establish a Collaborative One-Health and multidisciplinary Workforce

- To attain this work hard to mainstream One Health, attain Rabies Eradication by 2030, tackle Antimicrobial resistance (AMR), address Food Safety issues, administer, and control the quality, safety and efficacy of veterinary drugs and biological products, working at human-animal-environment interface.

Mitigate climate change impacts on animal health

- Reducing the impacts,
- Mitigating its effects and
- Adapting to changes.

Invest on Veterinary Infrastructure and Technology

- Improve diagnostic laboratories
- Standardize slaughterhouses
- Standardize veterinary clinic infrastructure
- Improve access to utilities.

Improve Quality and access to Veterinary Education, Research and Outreach

- Development of New Vaccine and Diagnostic Antigens
- Tailor-made demand driven trainings and community outreaches.

Improve Marketing of Animal Health input supply

- Ensure timely provision animal health inputs
- Strengthen quarantine and inspection systems
- Expand private animal health service and strengthen public private partnerships.

5. CONCLUSION AND PERSPECTIVES

It is hoped that this document will serve as a valuable resource of strategies/interventions for Tigray Bureau of Agriculture and Rural Development (TBoARD), Animal and Fisheries Directorate, to take whatever is highly relevant and feasible and hence a priority for detailed strategic plans and work plan cycles. Whilst other areas may be postponed or taken by other stakeholders such as GSTS, Academia, NGOs and the private sector particularly in those areas that require Public-Private Partnership (PPP). To implement the strategies and attain the desired outcomes there has to be a political will and commitment to transform the sector, invest on financial needs, assure inter-sectoral and interdisciplinary collaborations, design, and enforce monitoring and evaluation system. A shared responsibility between TBoARD, Tigray Agricultural Research Institute (TARI), Mekelle University, GSTS and Tigray Institute of Policy Studies (TIPS), Federal and Regional government, public and private animal health centers, professionals and non-governmental funding agencies is a crucial need.

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