

Major Constraints of Veterinary Services Delivery System and Its Solution in Pastoral Areas of Ethiopia

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Abstract

Livestock are essential assets for livelihoods which help to move out of poverty, as a way into lucrative markets, as a source of foreign exchange, as important socio-economic resources, and as means of saving. The Ethiopian livestock sub-sector is the largest source of foreign exchange earning which contributes much to the total national economy. Even though the livestock sub-sector is an important contributor to the national economy, its development is hampered by different constraints. The main constraints to livestock development in Ethiopia are diseases, nutrition, traditional husbandry and marketing problems. Animal diseases which are widespread in all agro-ecological zones of the country cause major economic and social losses to the livestock owners. The impacts of these diseases are devastating in pastoral and remote areas, where the lives of the communities entirely depend on their livestock. The pastoral area of Ethiopia is characterized by large land size, limited development and poor infrastructure. Animal health and veterinary services are presently not accessible to the vast majority livestock owners in pastoral areas of Ethiopia. The few public clinics present are located in major towns and provide services mostly to cattle owners residing around these towns. Problems such as highland based veterinary services, poor private service, drug resistance; weak veterinary drug quality control and weak disease reporting system, unorganized research and community services are major constraints that affect the quality of veterinary service delivery system in pastoral areas of Ethiopia. Therefore, the probable solutions which help in improving the quality of veterinary services in the pastoral areas of Ethiopia includes encouraging privatization of the services, community based animal health programs, promoting mobile veterinary clinic and organizing research works and implementing community services in collaborative way at regional level.

Keywords: Ethiopia, Drug, Pastoral areas, Quality, Veterinary service.

1. INTRODUCTION

Livestock are essential assets for livelihoods which help to move out of poverty, as a way into lucrative markets, as a source of foreign exchange, as important socio-economic resources, and as means of saving. (Scoones and Wollmer, 2006). Ethiopia has huge livestock resources in which the livestock production systems are generally subsistence oriented and productivity is very low (Belachew and Jemberu, 2003).

The Ethiopian livestock sub-sector is the largest source of foreign exchange earning which contributes about 16% of the total GDP (Zewdie, 2003). Even though the livestock sub-sector contributes much to the national economy, its development is hampered by different constraints. These include rampant animal diseases, poor nutrition, poor husbandry and marketing systems, poor infrastructure, and shortage of trained manpower. Livestock diseases have impacts that include loss of livestock and farm productivity, reduction of market opportunity, disturbance of human health and impairment of human welfare. Moreover, disease control activities may have negative impacts on improper use of chemicals and drugs (Abebe, 2003; Mayen, 2003).

In most African countries the animal health services has declined due to a number of reasons associated with stagnant economies with increased responsibilities of the states; inadequate and unpredictable access to foreign exchange; recession of global economy; and the presence of different production systems within a single economy in a country. In recognition of the shortcomings of conventional veterinary service delivery system, many development agents including nongovernmental organizations started using primary animal healthcare approaches. However, there are challenges to be addressed during the implementation of primary animal healthcare services related to poor organization of regulatory bodies, lack of clear demarcation between public and private goods services, poor management of the transfer of services from the government to the private sector, delivery of animal health services in low input areas and provision of adequate services of an acceptable standard (MOARD, 2010).

The development and growth of many poor countries depends on the performance of their agricultural policies and economies. This relates directly to the quality of their Veterinary Services. Important roles of veterinary services include veterinary public health, (including food-borne diseases), and regional and international market access for animals and animal products. To meet these opportunities and challenges, veterinary services need to operate on scientifically based principles and be technically competent, independent and immune from political pressures (OIE, 2010).

Animal diseases which are widespread in all agro-ecological zones of the country cause major economic and social losses to the livestock owners. The impacts of these diseases are devastating in pastoral and remote areas, where the lives of the communities entirely depend on their livestock. However, provision of

veterinary services becomes very difficult in these areas due to a number of reasons including poor infrastructure and limited resources. Besides, since the human population tends to be small and highly mobile, there are difficulties in reaching them since they travel much in search of water and grazing resources. Therefore, in order to be benefited from the livestock resources, emphasis has to be given to the pastoral communities since they possess huge livestock population and their livelihood depends on the health of their animals (Zewdie, 2003).

Pastoralism is extensively practiced in almost two-thirds of the Ethiopian national land area. The primary livelihood of pastoral communities is the management of livestock – cattle, goats, sheep and camels. Livestock are critical to the well being of pastoral households in terms of income, savings, food security and employment. Improvements in the sector, therefore, have the potential to contribute significantly to national income and to the welfare of many poor pastoral families (Admasu, 2003).

Veterinary services can be classified as curative services, preventive services, production of pharmaceuticals, human health protection, and advisory and extension services. Even though, Ethiopia has huge livestock population and the prevalence of animal diseases is high, the animal health service is steadily deteriorating similar to other many African countries. The national animal health service delivery in Ethiopia covers only 40-45% (Admasu, 2010) of the country's population. This low service coverage is attributed to lack of personnel, shortage of drugs and equipment, poor mobility, and highland oriented animal health service delivery (Abebe, 2003).

Therefore, revitalization of veterinary services is required to increase the efficiency and effectiveness of animal health care delivery and, consequently, livestock productivity; safeguard public health; and contribute to national development. The objective of this review is to discuss the major constraints of veterinary services delivery system and to forward possible solutions to improve the service in the pastoral areas of Ethiopia.

2. SITUATIONAL ANALYSIS AND JUSTIFICATION

2.1. Pastoralism

The nomadic or transhumant way of life of pastoralists is the mode of production best suited to an unstable environment, enabling strategic exploitation of seasonally available water sources and pasture. The arid climate in the lowlands is characterized by periodic droughts that may be increasing in frequency. A substantial portion of the pastoral populations, however, are food insecure even in normal rainfall years. Environmental degradation, water scarcity, increasing human and livestock population, and expanding areas under cultivation have contributed to a reduction in the quantity and quality of productive rangeland, which, combined with poor animal and human health, place enormous stress on the traditional pastoral and land management practices. These tensions increasingly result in conflicts between groups competing over scarce resources (Admasu, 2003).

The pastoral area of Ethiopia is characterized by large size, limited development and poor infrastructure. The human population tends to be small, highly mobile, and difficult to reach, and derive their food and income from their livestock. The main concerns of the pastoral people are livestock diseases and water supply (Abebe, 2003).

2.2. Veterinary Services

Veterinary services can be classified in four categories: curative services, particularly the diagnosis and treatment to treat diseased animals; preventive services to stop the emergence and spreading of diseases through vaccination, vector control and control measures, such as quarantine and forced slaughter of affected animals; production of veterinary pharmaceuticals; and; human health protection, such as sanitary inspection of animal products (Umali and de Haan, 1992).

According to World Bank (2002) animal health services include curative and preventive services and the provision of pharmaceuticals. Curative services include the provision of clinical care, while preventive services consist of vaccination, vector control, and disease control measures such as quarantines and movement restrictions.

2.2.1. Status of Veterinary services in the pastoral areas of Ethiopia

Veterinary service provision has always been dominated by the public sector, and is still the case today and, even now; more than 90% of veterinary staff is working in government service. Federal and regional government's veterinary services are responsible to oversee the quality and standard of animal health service. The Federal animal health service has retained policy-making and regulatory functions and has relinquished service delivery to the regions. Regional services are provided through clinics and animal health posts. Ministry of Agriculture guidelines direct that clinics should be staffed by veterinarians, animal health assistants and technicians and that health posts should be staffed by animal health technicians. These staffing levels are far from being met in the pastoral areas of the country (Admasu, 2003; MOARD, 2006).

Delivery of quality and affordable veterinary services is one of the effective means of enhancing livestock productivity. However, access to these vital services is inadequate as public resources are insufficient to serve the entire country. Lack of personnel, shortage of inputs (drugs, vaccines and equipment), poor mobility

and one size-fits-all model animal health service delivery system lets the nation to be with in a limited coverage of 40-45% (Abebe, 2003; Admassu, 2010).

Curative and preventive services are presently not available to the vast majority livestock owners in pastoral areas of Ethiopia. The few public clinics present are located in major towns and provide services mostly to cattle owners residing around these towns. The animal health staffs in these areas are small in number and cannot cover such a vast area and adequately address the veterinary needs of livestock keepers. Besides, government staffs need adequate mobile facilities, for which currently the government does not have the capacity to provide. The problem is not only the shortage of staff but also inadequate operational budget for animal health services compared to the magnitude of the disease problems in the country. Staff mobility is very limited; only occasionally do staffs venture outside their clinics to investigate outbreaks and render services. Furthermore service delivery is extremely difficult as the community and the animals are on the move throughout the year. Therefore the poor public animal health services delivery in the pastoral areas of Ethiopia are related to lack of finance, manpower, cultural and professional biases against pastoralists (Admasu, 2003).

In response to the animal health service delivery gap, governmental and nongovernmental organizations and development organizations introduced different models of community based animal health service delivery system as an interim measure to save livestock keepers from eventual loss of their asset and vulnerability. The system supports provision of basic animal health care by community animal health workers/CAHWs. CAHWs can provide services at much lower cost than comparable services delivered by professional veterinarians, because they live locally, do not require transport, often use cheaper local treatments and have lower income expectations. CAHWs are usually part-time workers who also make a living from rearing livestock (Admassu, 2010).

2.2.2. Veterinary service delivery system in Ethiopia

Organizational set up of the veterinary services in Ethiopia mainly consist of federal and regional entities, where the federal veterinary services is governed under the jurisdiction of the MoARD and the regional components are run under regional agricultural bureaus of the respective regional states (NEPAD, 2005).

Federal veterinary services

The major duties of the federal veterinary services include formulation of policies and strategies; serves as centre for animal health information, conduct disease surveys and investigations; involve in formulation of national projects; control major diseases; enforce regulations and certifications; prepare work plan and budget; and provide technical inputs (NEPAD, 2005; MOARD, 2006; Gebreegziabher, 2009).

Regional veterinary services

The duties of the regional Veterinary services consists of provision of preventive and clinical services; annual vaccinations, meat inspection, collection of data, infrastructure development, training of AHT and CAHWs, conduct diagnostic activities, procurement of drugs, biologicals and other veterinary products; and licensing private practices (NEPAD, 2005; Gebreegziabher, 2009).

District level veterinary services

The main activities of district veterinary services includes: provision of vaccination and treatment services to prevent and control diseases; conduct meat inspection at municipal slaughterhouse and collection and reporting of animal disease occurrence and meat inspection data (Zewdie, 2004).

2.3. Veterinary privatization

Currently, participation of the private sector in the delivery of veterinary services is occurring at an increasing rate. However, most of the participants are geared towards operating drugs shops and importation of veterinary pharmaceuticals, while clinical or diagnostic services are very minimal and are operative in and around Addis Ababa where there are commercial livestock farms (Admassu, 2003).

2.4. Main livestock production constraints

The main constraints to livestock development in Ethiopia are: diseases, nutrition, traditional husbandry and market. The main objectives of the veterinary services are to ensure animal health and welfare; protect human health and ensure the provision of healthy hygienic animal products (NEPAD, 2005).

2.5. Drug resistance

In Ethiopia as well as in most developing countries, animal disease remains one of the principal causes of poor livestock performance, leading to an ever-increasing gap between the supply of, and the demand for, livestock products (Agrawal, 1995). Pharmacotherapy is one of the most important means of controlling livestock diseases, but it is possible only if livestock owners can afford to cover the cost of treatments. Cost of treatment is therefore, an important determinant of the usefulness of veterinary drugs.

In Ethiopia, conventional veterinary services have been playing a paramount role in the control and prophylaxis of livestock diseases in the last three decades. However, they cannot yet deliver complete coverage

in preventive and curative health care practices because of inadequate labor, logistical problems, an erratic supply of drugs, and the high cost of drugs and equipment. Consequently, the majority of those raising stock in rural areas especially are far from the site of veterinary stations, and those who have access to veterinary services may not be able to afford to pay for them. Additionally, reduced funding for animal disease control is an issue in Ethiopia and is likely to influence the incidence of some serious livestock diseases (Sori *et al.*, 2004).

2.6. Livestock disease reporting system

The communication between the different actors of the Surveillance system, the Federal Veterinary Services, the Regional Veterinary Services, the districts, the Regional Laboratories, the Federal Research Institute and the National Veterinary Institute (NVI) are not intensive and their relationship is complicate. A problem is clearly the how to bring the different actors together despite shortages, communication problems and obstacles, and even more how to achieve a constant and reliable data flow (Mayen, 2003).

There were found two types of reports accomplishing by veterinary offices. Routine activities reports contain specific cases, curative service of veterinary clinics and health posts and mass vaccinations information whereas outbreak reports are only included information of outbreaks occurred. Veterinary offices have been reporting routine activities veterinary clinics/posts through hierarchal chains from local to district to region and finally to national office. The reports are submitted to their respective high level veterinary offices on monthly, quarterly and annually basis but in Ethiopia side only on quarterly and annually basis. There are international formats developed, for routine activities reports are, in general, prepared in such a way to collect type of species, age and number of animal treated; type of diseases diagnosed; and type of drug used for treating. Species and number of animals vaccinated and type vaccine used data could be included to these reports format if vaccinations are done (Bayissa and Bereda, 2009).

2.7. Animal health measures applied for slaughter and export of animals

The current international standards governing trade in livestock commodities insist that animal products be derived from areas which are free from certain animal diseases. The underlying principle of the standards is that if an area is not free from disease, it cannot export disease to another area or country. For Africa and other developing regions, the implication of the standards is that these regions need to eradicate numerous animal diseases before they can engage in international trade. Unfortunately, such eradication is technically infeasible and hugely expensive, and therefore, millions of livestock producers remain isolated from lucrative international markets (MOARD, 2010).

The OIE *Terrestrial Animal Health Code* specifies the guidelines for safe animal and animal product trade. These guidelines specify that livestock and livestock products must originate from countries or specified geographical areas (zones) of a country that are free from major animal diseases, capable of causing economic losses or human diseases. Like other developing countries, constrained by these international regulations, Ethiopia is considering the establishment of disease free zone in Borena, Ogaden and Afar areas in order to maximize profits from the huge livestock resource in these parts of the country. The document highlights accounts on livestock resource potential, profiles of each of these areas, descriptions of project components and expected outputs along with the various phases of the implementation process. In addition, it also provides details on organization and management needs, monitoring and evaluation mechanisms and capacity (manpower, facility) requirements for the implementation of the project. Currently, there is no disease free zone officially communicated to the OIE (NEPAD, 2005).

2.8. Veterinary drug administration and quality control

The Veterinary Drug and Feed Administration and Control agency was established as a semi-autonomous regulatory agency through Proclamation No. 728/2011 which is applicable to regulatory activities in respect of veterinary drugs, feed and veterinary drug professionals. The agency has the power to set standards and ensure their observance, to control the quality of raw materials and packaging and to monitor drugs and set standards for traditional medicine practitioners and users. It regulates trans-regional veterinary drug and feed production, distribution, promotion, storage and quality control and veterinary drugs and feed import and export activities. Along with these functions, inspectors are empowered to search any premises, conduct inspections, seize documents and take samples of materials. It performs import and distribution controls through a system of registration and import permits (Negarit, 2012). However, veterinary drugs handling and management problems, illegal drug smuggling and marketing, drug misuse and abuse and free charge drug dumping are widely occurring events in the pastoralist areas Ethiopia.

3. POSSIBLE SOLUTIONS

The probable solutions which help in improving the quality of veterinary services in the pastoral areas of Ethiopia includes encouraging privatization of the services, community based animal health programs,

promoting mobile veterinary clinic and organizing research works and implementing community services in collaborative way.

3.1. Encouraging veterinary privatization

Currently, participation of the private sector in the delivery of veterinary services is occurring at an increasing rate. However, most of the participants are geared towards operating drugs shops and importation of veterinary pharmaceuticals, while clinical or diagnostic services are very minimal and are operative in and around big cities where there are commercial livestock farms (Admasu, 2003). Encouraging the private sector to participate in clinical and diagnostic services will create a competitive environment which helps in providing veterinary service of good quality.

3.2. Community-based Animal Health Programs

Currently, the Community-based Animal Health Program is the successful way of delivering animal health services in pastoral and remote areas of the country. It is because of private veterinary service is limited to towns and profitable areas, governments are unable to continue funding many goods and services, the public sector is not always efficient or effective provider of goods and services and should instead focus on policy formulation and regulation, communities had always managed their own livelihoods and natural resource base, the failure of top down approaches and the success of participatory and community based approaches (Abebe, 2003; Admasu, 2003).

Community-based Animal Health Workers (CAHWs) are community members who have received basic and non-formal training in animal health care and who prevent and treat animal diseases within their community. In Ethiopia, CAHWs are so far trained by the government and NGOs, in which the share of the government is 53% and the share of NGOs is 47%. Services that are delivered by CAHWs are treatment using antibiotics, vaccination, deworming for internal parasites, spraying for external parasites, minor surgical treatments, dehorning, close castration, and reporting disease outbreaks (Abebe, 2003).

In order to the alternative service delivery be efficient, there should be a clear strategy laid regarding linkage, supervision and monitoring, fund management, drug supply. Besides, due emphasis has to be given to National guidelines, manuals and indicative training curriculum guide. Moreover, regional agricultural bureaus should assign a desk officer for the community animal health program (Nega, 2003).

3.3. Mobile veterinary clinic

The pastoral community has no stable life as it wanders from place to place following its animal in search of feed and water. This condition makes the fixed animal health service of highland style very difficult and ineffective in control and prevention of livestock diseases in pastoral areas of Ethiopia (Abebe, 2003; Admasu, 2003). Therefore, promoting fully fledged mobile veterinary clinic with all required facilities and services supported by national policy and budget is a timely solution to control and prevent the livestock diseases and to improve the livelihood of the pastoral community.

3.4. Organizing research works and community services at regional level

Research works and community services done by different bodies and institutions in the region are not communicated and not disseminated well to the concerned bodies. Moreover, it is not done in an organized way in which there is a redundancy, not demand driven and not problem solving. Therefore, there is a need to monitor studies done on the pastoral areas and giving community service works in an organized and sustainable way in recognition of regional governmental bodies.

Research works and investigations done so far should be collected in all directions concerning animal health and veterinary services and evaluating their recommendations. The regional government and other governmental and nongovernmental organizations should be collaborative institutions to give support and monitor the progress and be responsible to get the outputs. Community service programs of every institution found in the region should be in line with regional government priority areas and should be demand driven. Both the research works and community services will be successful in supporting the animal health and veterinary services delivery system if they can be done in an organized and collaborative way.

4. CONCLUSION

The main constraints to livestock development in Ethiopia are: diseases, nutrition, traditional husbandry and market. Animal diseases which are widespread in all agro-ecological zones of the country cause major economic and social losses to the livestock owners. The impacts of these diseases are devastating in pastoral and remote areas, where the lives of the communities entirely depend on their livestock. However, provision of veterinary services becomes very difficult in these areas due to a number of reasons including poor infrastructure and limited resources. Besides, since the human population tends to be small and highly mobile, there are difficulties

in reaching them since they travel much in search of water and grazing resources. Therefore, in order to be benefited from the livestock resources, emphasis has to be given to the pastoral communities since they possess huge livestock population and their livelihood depends on the health of their animals. The main objectives of the veterinary services are to ensure animal health and welfare; protect human health and ensure the provision of healthy hygienic animal products. Curative and preventive services are presently not available to the vast majority livestock owners in pastoral areas of Ethiopia. The few public clinics present are located in major towns and provide services mostly to cattle owners residing around these towns. The animal health staffs in these areas are small in number and cannot cover such a vast area and adequately address the veterinary needs of livestock keepers. Therefore, the probable solutions which help in improving the quality of veterinary services in the pastoral areas of Ethiopia includes encouraging privatization of the services, community based animal health programs, promoting mobile veterinary clinic and organizing research works and implementing community services in collaborative way at regional level.

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