



Review of the policy, regulatory and administrative framework for delivery of livestock health products and services in West and Central Africa

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Abbreviations and acronyms

AU-IBAR	African Union Inter-African Bureau for Animal Resources
AMVC	Association des Médecins Vétérinaires Congolais
CAHWs	Community-based Animal Health Workers
CBPP	Contagious Bovine Pleuropneumonia
CEDEAO	Communauté Economique du Développement des Etats de l'Afrique de l'Ouest
CEMAC	Central African Economic and Monetary Community
CPD	Continuing Professional Development
CVO	Chief Veterinary Officer
DGSV	Directeur General de Services Vétérinaires
DVOs	Divisional Veterinary Offices
DVS	Director of Veterinary Services
ECF	East Coast Fever
ECOWAS	Economic Community of West African States
EU	European Union
FAO	Food and Agriculture Organisation of the United Nations
FMD	Foot and Mouth Disease
GALVmed	Global Alliance for Livestock Veterinary Medicines
GDP	Gross Domestic Product
ICRC	International Committee of the Red Cross
LANAVET	Laboratoire National Vétérinaire/National Veterinary Laboratory
LCV	Laboratoire Centrale Vétérinaire/Central Veterinary Laboratory
LNERV	Laboratoire National d'Elevage et de Recherches Vétérinaires
MoU	Memorandum of Understanding
NDV	Newcastle Disease Virus
NGO	Non-governmental Organisation
ODVS	Ordre des Docteurs Vétérinaires du Sénégal
OCC	Office Congolais de Control
OIE	Organisation Mondiale de la Santé Animale/World Organisation for Animal Health
PACE	Pan-African Control of Epizootics
PARC	Pan-African Rinderpest Campaign
PPCB	Péri-pneumonie Contagieuse Bovine
PPR	Peste des Petits Ruminants
SADC	Southern African Development Community
TADs	Trans-boundary Animal Diseases
ToRs	Terms of Reference
UEMOA	Union Economique et Monetaires Ouest Africaine
VSF	Vétérinaires sans Frontières
VSVPP	Veterinary Surgeons and Veterinary Para-professionals

Executive Summary

An analysis of the national policies, strategies and legal framework (Acts of Parliament, subsidiary legislation and Ministerial decrees) related to the delivery of livestock health products and services in Democratic Republic of Congo (DR Congo), Burkina Faso, Senegal, Mali, Cameroon, Nigeria and Ghana was carried out. The review focused on how products (veterinary medicines, vaccines and field diagnostics) are registered and distributed to reach the farmers who rely on livestock for their livelihood. It also reviewed the actors involved in service delivery and the challenges or constraints that are encountered. Secondary data sources were reviewed. These included national, regional and international reports available as hard copies, published literature and documents available on the Internet. Appropriate target respondents from Government veterinary services, the veterinary boards and veterinary associations, schools of veterinary medicine, organizations involved in veterinary service delivery, non-governmental organizations (NGOs), community-based organizations and distributors of veterinary pharmaceuticals were identified, in consultation with GALVmed, and their consent to participate in the study obtained. A list of the respondents who participated in this study is summarized in Annex 1. Though a questionnaire was developed for this study, it was later found to be more prudent to use a more general framework for data collection during interviews with the key respondents.

The veterinary services in the study countries have been affected both by external structural policies imposed by multilateral institutions and by internal policies imposed by national constitutions that have placed a major focus on the privatization of clinical services, devolution and citizen participation in decision making. According to the OIE, the quality of the veterinary services of a country depends on a set of factors, which include fundamental principles of an ethical, organizational, legislative, regulatory and technical nature. Compliance with these fundamental principles by the veterinary services of a country is important in the establishment and maintenance of confidence in its international veterinary certificates, required by the veterinary services of countries that import livestock and livestock products. The OIE recommends a strong chain of command as a key pillar of effective veterinary service.

Before the onset of the structural reforms of the 1980s, central governments provided most of the veterinary services. With the reforms, central governments have tended to concentrate on regulatory, policy formulation and law enforcement functions. Central governments devolved animal health services to local government and to the private sector.

It was also noted that regional economic integration and the predominance of livestock production over crop production systems seem to have affected veterinary service delivery systems. Hence, in the UMEOA region, where the integration is said to be more effective than in the CEDEAO (Nigeria and Ghana), and in the CEMAC region (DR Congo and Cameroon), the veterinary services are well structured and veterinary product delivery systems are more effective. Similarly, in countries and regions with a more arid climate, where livestock is predominant over crop production, such as Burkina Faso, Mali, Senegal and, to some extent, the northern region of Cameroon, good veterinary services and product delivery systems are in place. Except for Mali, where the State still has control over the profession, most of the countries in the UMEOA region have effectively privatized veterinary services. Most importantly, private vets in this region have a sanitary mandate; i.e., the Government has delegated some of its core duties such as vaccination to private vets, who employ the para-veterinarians (animal health technicians, vet nurses, etc.) and vaccinators. As supported by the OIE regional representation, countries in the CEDEAO region have attempted some degree of restructuring of veterinary services. Although in Nigeria and Ghana the veterinary services have been privatized, veterinary surgeons operate in big cities and deal mainly with pet clinics and sales of veterinary products and vaccines. The central region has less-structured veterinary services and product/vaccine delivery systems. In DR Congo and Cameroon, most of the rural population is generally made of agriculturists who keep some livestock and poultry. The veterinary services and the veterinary profession have a low status, which has a negative effect on the delivery systems.

Except for DR Congo, where there is no veterinary regulatory body (council or board) but, instead, an association considered as a mere membership organization, the veterinary profession is well regulated in the other countries. Different levels of organization were noted, with Senegal and Nigeria having considerable numbers of veterinary surgeons, para-veterinarians and para-professionals (animal scientists; livestock technicians, etc.). Ghana, exceptionally, has ageing veterinary service personnel, because veterinary training institutions were not in existence in the country and no new staff were employed after the World Bank recommendations on structural adjustment. Only the Senegalese regulations allow para-professionals to execute veterinary duties, whilst para-vets are allowed in all countries to work (officially) under the supervision of a veterinary surgeon. In general, the community animal health workers (CAHWs) are more operational in countries where the pastoralist system persists. In other regions, they are perceived as temporary agents and as an unsustainable developmental tool brought in by NGOs and international aid agencies. Nigeria and Ghana have a defined training curriculum for CAHWs.

With regard to the registration, import and commercialization of veterinary drugs, vaccines and diagnostics, the UEMOA constitutes the best working model. Besides the Regional Commission directives, each country has an appropriate legal framework for the implementation of these operations. Fake products constitute a small proportion of the total products in comparison with other regions (10–20%). However, the system is said to be slow; only about 20% of dossiers submitted by some pharmaceutical firms have been processed. Porous borders, but also a lack of commitment, and inadequate legal frameworks, have favoured an uncontrollable situation in many countries. DR Congo has no registration system in place for veterinary drugs and Cameroon has a very limited staff dedicated to the registration and control of points of sale. In general, national institutions or services dealing with medicine registration, located in the ministries of health and managed pharmacists, do not have the capacity (or the appropriate training) to register veterinary products in particular animal vaccines. In Nigeria, however, the Medicines Control Board has been striving to control the port of entry of unregistered and fake

products by restricting the ports of entry of all medicines to airports only. In most countries, farmers have access to all veterinary drugs from veterinary clinics, recognized retailers (agro-vets) and occasionally from direct import.

Vaccine production, distribution and sales are still predominantly under governments' close control, influence or supervision. Governments often fix vaccine prices, which are then not reviewed again. When vaccine prices are fixed by a Government in this way, it becomes difficult for structures outside the Government to operate economically in this sector. This is made worse when insufficient quantities of vaccines are provided free of charge to farmers. Subsequently, private vets and para-vets are not interested in vaccination campaigns when proper sanitary mandates are not allocated. Even under these conditions, private vets in Senegal and Cameroon have reported financial losses when they are involved in vaccination campaigns.

Diagnostics are conducted by central or regional veterinary laboratories. These services are rendered free of charge to farmers, except for large operators seeking specialized tests. Field diagnostic tools were rarely mentioned, except by some small-scale dairy farmers using mastitis, brucellosis and tuberculosis testing kits.

The OIE has its regional (Sub-Saharan Africa) office in Mali. The OIE acts through directives and support to veterinary services and organizes training workshops, but it is the responsibility of the governments, through their own their legal structures, to incorporate these directives in the corpus of legislation. Its role is regulatory and its support is aimed at the modernization of veterinary services. When a Government requests training in veterinary legislation development, a Memorandum of Understanding (MoU) is signed with the country. With the support from the OIE, countries engage to follow with their legal staff. OIE has supported the harmonization of veterinary medicines registration in the UEMOA region, with eight countries transposing these directives into legislation. The OIE has asked for focal points to put in place regulations to reinforce competences and national structures (delegates are normally DVS). According to the OIE, NGOs must respect the rules and avoid importing products or distributing them as they wish.



1 Objectives

The objectives of the study were to review the policy, regulatory and administrative framework under which actors involved in the delivery of livestock health products and services in DR Congo, Burkina Faso, Senegal, Mali, Cameroon, Ghana and Nigeria operate.

This study was commissioned by GALVmed in order to understand the policy constraints and opportunities to use actors outside the public sector/government mechanism in the delivery of livestock health products and services. The results of this study will inform GALVmed market development, adoption and global access strategies.

2 Methodology

An analysis of the national policies, strategies and legal framework (Acts of Parliament, subsidiary legislation and Ministerial decrees) related to the delivery of livestock health products and services in DR Congo, Burkina Faso, Senegal, Mali, Cameroon, Ghana and Nigeria was carried out. The review focused on how products (veterinary medicines, vaccines and field diagnostics) are registered and distributed to reach the actors involved in service delivery, and on the challenges or constraints that are encountered. A number of key documents available on the Internet were reviewed; hard copies of the national policies and brochures were also obtained where available. Appropriate target respondents from government veterinary services, the veterinary boards and veterinary associations, schools of veterinary medicine, organisations involved in veterinary services delivery such as

Organisation Internationale des Epizooties (OIE), AU-IBAR, Vétérinaires sans Frontières (VSF) Belgium and many distributors of veterinary pharmaceuticals were identified, in consultation with GALVmed, and their consent to participate in the study obtained. A list of the respondents who participated in this study is summarized in Annex 1. Though a questionnaire was developed for this study, it was later found to be more prudent to use a more general framework for data collection during interviews with the key respondents. Livestock owners are the key actors and the primary beneficiaries of an effective delivery of livestock health products and services. Due to time limitations, no meaningful interviews were conducted with the livestock owners. This remains a key weakness of the study. In addition, due to time and resource constraints, only actors within the urban centres were accessible.

3 Review of country veterinary administrative structures and legislative framework

In the last three decades, the veterinary services in DRC, Burkina Faso, Senegal, Mali, Cameroon, Ghana and Nigeria have progressively moved from a centralized administrative structure with a strong chain of command to a mix of centralized systems with varying degrees of decentralization. These changes have been driven by both external forces, such as the Structural Adjustment Programme, and internal forces, such as national constitutions and regulatory frameworks. A brief review of the veterinary administrative structures in these countries is summarized below.

3.1 DR Congo

The veterinary services operate under the Directorate of Veterinary Services (DVS) in the Ministry of Agriculture, Livestock and Fishery. Administratively, each level reports to the corresponding head of agricultural services (Inspector of Agriculture and Rural Development) and technically to the head of veterinary services in the next highest jurisdiction. For instance, the district veterinary services head reports to the district Inspector of Agriculture and Rural Development and technically to the provincial head of veterinary services.

The Directorate accomplishes its disease control mandate through an administrative structure, with a clear chain of command from the DVS through a hierarchy of provincial and district veterinary officers, divisional veterinary officers and animal health technicians, in collaboration with the private sector involved in animal health services. However, the implementation of devolved provincial governments under the new Constitution (2006), unless handled with care, has the potential of undermining the existing strong chain of command in veterinary services for effective disease control. Devolution of veterinary services in line with the new Constitution has the potential for conflicts if provincial governments refuse to comply with disease control policies, such as the closure of livestock markets to control a disease

outbreak, as this would interfere with their revenue streams. Although a well-defined structure of services exists, agents are not present on the field due to lack of infrastructure, logistics, etc.

3.2 Burkina Faso

The veterinary authority is under the Ministry of Livestock. The Ministry deals with the development and application of legislation and regulations on the protection and improvement of animal health and veterinary public health. The veterinary authority is centralised and has powers over the organisation of the veterinary profession, pharmacy and disease control nationwide and at the borders. In Burkina Faso, livestock represents 18% of GDP, after crops and gold, and occupies 80% of the rural population. Hence, the delivery of veterinary services is very important for the country. The veterinary services are headed by the "Directeur General de Services Vétérinaires" (DGSV) corresponding to the DSV or CVO at national level. There are veterinary structures for each of the 13 regions, 45 provinces, 351 departments and 18 border posts. A veterinarian or a qualified animal scientist (Ingénieur d'élevage) heads each region. Veterinary surgeons, animal scientists or technicians head provincial veterinary services, whilst technicians head posts. Private veterinarians are engaged in clinics, veterinary pharmacy and the wholesale supply of veterinary products; some are representatives of multinational firms. Private veterinarians and para-vets are authorised to operate by the Minister of Animal Resources, after approval of the DGSV. CAHWs are not officially recognised; the Government uses technicians in place of CAHWs.

The Central Veterinary Laboratory conducts routine diagnostics under a national disease surveillance framework. Field diagnostic kits can be imported with a visa for experimental trials, but for commercialization, national authorization is required.

3.3 Senegal

The Minister of Livestock is responsible for preparing and implementing policies defined by the Head of State in the field of livestock. The Directorate of Veterinary Services has four divisions, including the Division of Zoo Sanitary Protection (disease control), the Division of Veterinary Public Health and the Division of Legislation and Regulation.

The Directorate of Veterinary Services is responsible for animal health and protection. This is achieved by developing and implementing strategies in the field of animal health and veterinary public health: the development and implementation of the laws on animal health; and the development and implementation of regulations in the fields of profession and veterinary pharmacy and the safety of food of animal origin. In collaboration with the Directorate of Livestock, it is concerned with the quality of animal feed; liaison with national, regional and global specialized agencies in the field of animal health and veterinary public health; and the management of import and export veterinary certification of animals and animal products (seeds, eggs, embryos, etc.).

3.4 Mali

The Ministry of Livestock and Fishery of Mali is relatively new (2005). The veterinary services are centralized and organized at national, regional and district levels. The DVS has three divisions: Legislation and Norms; Surveillance and Disease Control; and Inspection and Veterinary Public Health.

The DVS is in charge of the elaboration and control of legislation and regulations related to zoo-sanitary protection and veterinary public health; the control of diseases; participation in the elaboration of norms on animal welfare and veterinary public health; and the centralization and dissemination of information and statistical data on animal welfare and veterinary public health. The regional directorate is placed under the administrative authority of the Provincial Governor/district of Bamako and the technical authority of the National Director of Veterinary Services. He conducts programmes and projects related to animal welfare and veterinary public health.

Most veterinarians in Mali are in the private sector¹; there are about 90 veterinarians in the public sector. Farmers at the beginning of the privatization process did not trust private vets. The PARC and PACE programmes (funded by the EU through AU-IBAR) facilitated their acceptance by farmers. Private veterinarians are accredited by the Minister in charge of livestock, after approval by the Veterinary Board. Some private vets have sanitary mandates (about 154). The Government provides cover/vaccinations in areas where there are no private vets.

3.5 Cameroon

Decree No. 2000/152 of 4 May 2005 on the organization of the Ministry of Livestock, Fisheries and Animal Industries recognises that the Director of Veterinary Services is responsible for “the development, monitoring of the implementation and evaluation of public policy in health protection and veterinary public health.” This is in contradiction with the actual role of the Provincial Delegation, which does not fall under the authority of the DVS. Because veterinary service structures in Cameroon are not autonomous, each level reports technically and administratively to the jurisdictional authority. At the central level, the DVS has a high-level staff, capable of designing all the technical elements relating to legal texts likely to support, to a good extent, the objectives of the Code and the SPS Agreement.

The sanitary mandate does not work because vets from the public sector do not support the process, since they continue to do clinic work. There are no regulations in place to make the sanitary mandate work. The biggest issue, according to the Minister in charge of livestock, is the zoning of sanitary mandate areas. The Veterinary Council has already demarcated different areas for private vets; however, only busy and wealthy areas were considered, leaving the rest to the public sector. This is why the Minister has not been supportive of the process that was started in 2011.

3.6 Nigeria

The veterinary services of Nigeria are managed at Federal level (CVO) and State level (DVS). The Federal and State veterinary services are well coordinated. The Federal services have responsibility for disease control and trans-boundary animal diseases (TADs), in partnership with states and legislation development.

¹ Feedback from informants from Mali was that there is a significantly higher number of vets in the private sector than in the public sector. There are 14 private vets who are wholesalers, with 30 outlets and 250 private clinicians, 154 of whom have health mandates.

States report routinely and receive instructions from the Federal Government. The Federal Department of Livestock (FDL) in the Federal Ministry of Agriculture and Rural Development is composed of eight divisions and has field offices at State capitals for ease of collaboration with the State DVS. The State veterinary services are in charge of disease control, the provision of clinical services, livestock product quality control, meat inspection and the extension and development of regulations. Local government veterinary services mainly participate as mobilisation and extension agents in operational actions, in close coordination with the State Area veterinary officers, livestock farmers, traditional institutions, law enforcement agents and other stakeholders, to facilitate the delivery of services, disease reporting and the control of livestock diseases and pests.

Two other Federal institutions that are involved in veterinary services missions are the National Agency for Food and Drug Administration (NAFDAC), in charge of the registration and control of veterinary medicines and biologicals, and the National Agency for Quarantine Services (NAQS), in charge of border control and quarantine services.

The Agricultural Transformation Agenda (Growth and Enhancement Support – DES), under which farmers are helped, allows the delivery of inputs to farmers through dealers – the private sector is leading the process. It encourages agri-business more than rural development programmes. It also provides subsidies of up to 50%, but the model does not seem to be sustainable. Many veterinarians think of the public-private participation (PPP) model as a better solution.

The National Veterinary Research Institute (NVRI) at Vom carries out research into priority diseases; it receives funds directly from Government (finance) and not through the Ministry in charge of livestock, although there is some monitoring from the Ministry. Funds limitation is a serious problem, explaining the shortfall in vaccine production. The NVRI employs about 100 veterinarians and laboratory staff and researchers. It is part of a regional framework ensuring back up diagnostics for influenza, serum production, training and vaccine production for some countries and procurement for some labs (e.g. Sudan) and training of lab staff (for Liberia and Sierra Leone). Poultry diagnostics are not charged for. Due to obsolete instruments/apparatus, the NVRI does not have the capacity for export and its production is based on vaccine demand by farmers and not according to vaccine coverage. FAO uses the facilities; some vaccine demands are not reached, the facilities need to be expanded and some apparatus (such as a freeze-dryer)

is needed. Different states use different distribution models; e.g., there is full-cost recovery using CAHWs some states but not in others. Vaccine prices were last reviewed in 2004. Field diagnostic tools are available to private veterinarians in 24 states. These labs are at the same level of expertise, dealing with basic clinical and pathological exams. The availability of funding determines the level of lab work performed; e.g., the outbreak of Influenza meant that there was an improvement of veterinary services in terms of surveillance.

3.7 Ghana

The veterinary service of Ghana was restructured in 1997 as a decentralized service, with the national level in charge of policy development and international matters (e.g. Codex Alimentarius, TADs, etc.). Unfortunately, it is not autonomous: the regional/district/local services are integrated with mainstream agriculture, making the chain of command somewhat confusing. At the national level, functions are mostly headed by veterinary surgeons, whereas at the lower levels (districts, regions, etc.), the veterinary services are directed by any agricultural graduate (not necessary a vet) under the Ministry of Food and Agriculture (MoFA). Moreover, veterinary activities were reduced following World Bank recommendations on a structural adjustment programme. From interviews with key informants, it was widely felt that the World Bank imposed structural adjustment programmes that negatively affected the delivery of animal health services, due to decreased public budgets. According to the Ghana Veterinary Medical Association (GVMA), “the attempt to subsume veterinary activities and veterinary surgeons under the general agriculture (crops), with vets working under the direct supervision and control of any agricultural graduates designated as district and regional directors of agriculture who are even juniors in some cases, is strangulating the proper performance of veterinary functions in the ministry”. For instance, veterinary clinics were used for other activities since privatisation in the 1990s. It was only during the recent Avian Influenza outbreak that these infrastructures were taken back by the veterinary service.

Different policy documents and laws are obsolete; for instance, the Diseases of Animals Act of 1961 is still in application; and the Veterinary Surgeons’ Act of 1992, which established the Veterinary Council of Ghana in 1993, has not been reviewed. The registration of veterinary products is still under the Pharmacy Act, which is controlled by pharmacists. There is almost no control of veterinary remedies; the Veterinary Council of Ghana is updating the laws for this purpose.

4 Analysis of key findings



The study reviewed the policies on the delivery of veterinary services and the development of the livestock industry in DR Congo, Burkina-Faso, Senegal, Mali, Cameroon, Nigeria and Ghana, and the roles played by the public and private sectors in the delivery of livestock health products and services. Following recent work by the OIE (PVS analysis) and AU-IBAR (VETGOV), there has been considerable reform in veterinary legislation in some African countries.

4.1 DR Congo

4.1.1 Disease control

The Director of Veterinary Services is empowered to control animal diseases and pests through various old and obsolete statutes (e.g., the Decree of 28 July 1938 on Livestock Disease Control). The list of priority and controlled diseases has not been reviewed. This means that control measures described in this Decree cannot be applied as such, because different control methods, including new vaccine applications, have since been developed. However, where laws are outdated or missing, SADC, OIE and other international directives are adapted. A draft zoo-sanitary law was submitted to Parliament two years ago.

4.1.2 Registration of veterinarians and veterinary para-professionals

The "Association des Médecins Vétérinaires Congolais" (AMVC), or the Association of Veterinary Surgeons, was created by a Presidential Decree of 1981. It is a membership organisation that deals with veterinary medicine matters in the absence of a veterinary board or council. It has as major role in the protection and promotion of the profession and has no

regulatory mandate. As such, it is a mere membership organisation with voluntary participation. The Association of Para-veterinary Personnel was created by a Ministerial Ordinance in 1982. They are trained in technical high schools over six years, following a curriculum similar to medical nurses, or in institutions of higher education specialising in different aspects of animal health and production, over three years post-high school. CAHWs are not recognised and they do not operate in the country. Animal scientists and other livestock technicians who have majored in animal production also have a workable knowledge of different aspects of animal health.

4.1.3 Registration and sale of livestock health products

The Pharmacy Law under the Ministry of Health provides for the registration of all drugs, including veterinary medicines and vaccines. The Office Congolais de Control (OCC) has the mandate for quality control. The Veterinary Medicines Directorate, known as The Service National des Intrants Vétérinaires et d'Élevage – SENIVEL, was created by Decree No. 25/2001 of 14 April 2001 within the Ministry of Agriculture, Livestock and Fisheries, with responsibility for the inspection of veterinary outlets and pharmacies. However, the Directorate is under-staffed and almost non-operational. Contrary to the legal framework, veterinary drugs are not registered before they are imported into the country. A licence to import the products can be obtained from the DVS without the presentation of any dossier. A simple description of the product on the form is all that is required. At the port of entry, officials from the customs and standards control (OCC) do collect samples for some ineffective tests.

Table one: SUMMARY OF FINDINGS ON LIVESTOCK HEALTH PRODUCTS AND SERVICES DR CONGO

Livestock health products and services	Actors with legal recognition	Legal provision	Practice in place
Registration of livestock health products (drugs, vaccines and diagnostic kits) and pest control products.	Application for registration can only be made by: <ul style="list-style-type: none"> • Licence/patent holder • Manufacturer or • A local technical representative of the holder or the manufacturer 	Registration of veterinary drugs, including vaccines, is provided for under the Pharmacy Act	There is no registration system in place for veterinary drugs and vaccines, although the Pharmacy Act provides for registration of veterinary drugs. SENIVEL is ineffective.
Importation of drugs, vaccines and diagnostic kits.	There is no a proper system in place for veterinary products. Wholesalers, retailers, farmers, NGOs, churches and almost anybody can be authorized on filling in an application form describing the product/vaccines.	The DVS, under the Animal Diseases Act, issues permits for importation of vaccines and authorizes their use in the country. Vaccine importers have to get permits from the DVS and OCC.	Wholesalers, retailers, farmers, NGOs, churches, and almost anybody, can be authorized. Fake products are also available in the market and are alleged to originate from neighbouring countries.
Distribution and sale of veterinary drugs, vaccines and diagnostic kits (<i>Who is allowed to prescribe, sell and/or administer</i>).	Pharmacists and veterinarians are allowed to sell and distribute veterinary drugs, vaccines and diagnostic kits.	SENIVEL has the mandate to acquire veterinary drugs.	Nearly all veterinary drugs can be purchased by animal health service providers and farmers without prescription. Fake products are also available in the market.
Sale of registered pesticide products (<i>Who is allowed to prescribe, sell and/or administer</i>).	Pharmacists and veterinarians are allowed to sell and distribute veterinary drugs, vaccines and diagnostic kits.	SENIVEL has the mandate to acquire drugs.	Nearly all veterinary drugs can be purchased by animal health service providers and farmers without prescription. Fake products are also available in the market.
Medication – treatment	Qualified vets and para-vets.	Animal Diseases Act of 1938.	Treatments are offered by veterinarians, veterinary para-professionals, livestock technicians (not trained in animal health), and animal owners. Animal owners can freely access drugs without prescription and treat their animals, or get para-professionals to do it.
Vaccinations	Directorate of Veterinary Services. Qualified veterinarians and veterinary para-professionals under supervision of a veterinary surgeon. Animal owners are allowed to vaccinate their own animals.	The DVS, under Animal Diseases Act, has to authorize importation and use of vaccines in disease control.	Individuals and institutions can buy vaccines from manufacturers, distributors and retailers without prescription from a veterinary surgeon. Most poultry farmers decide when to vaccinate. Vaccines are readily available to farmers who vaccinate themselves or acquire the services of Government and NGO technicians (Animal health technicians)
Clinical diagnosis and field diagnostics	Veterinary officers in the Department of Veterinary Services. Veterinary surgeons and veterinary para-professionals.	Under the Animal Disease Act, veterinary officers obtain specimens from sick animal to ascertain the nature of a notifiable disease. Veterinary laboratories in the Department of Veterinary Services provide laboratory confirmatory diagnosis to guide treatments and vaccination.	Clinical diagnosis is the principal form of diagnosis used in treatment of sick animals. Public sector veterinary laboratories are not efficient, due to inadequate financial resources.

4.2 Burkina Faso

4.2.1 Disease control

Many legal documents empower the veterinary service in the control of diseases (see list in Annex 3). The DVS has power to take all necessary measures and develop texts that can help to stop the expansion of animal contagious diseases, their eradication and control of entry and exit at the borders. The legal framework also defines the different categories of diseases and control measures for each disease. The DVS has legal authority for the inspection of animals, including wildlife, animal products, livestock infrastructures, artificial insemination, veterinary product manufacturing and marketing/distribution. It is tasked with the inspection on determination and application of regulations in the country and the borders.

A veterinarian or animal scientist (ingénieur d'élevage) heads each region; veterinary surgeons, animal scientists or technicians head the provinces; whilst technicians head the posts. Private veterinarians are engaged in clinics, veterinary pharmacy and the wholesale supply of veterinary products; some are representatives for multinational firms. Private veterinarians and para-vets are authorized to operate by the Minister of Animal Resources, after approval of the DGSV. CAHWs are not officially recognized; the Government uses technicians in place of CAHWs.

4.2.2 Registration of veterinarians and veterinary para-professionals

A well-elaborated legal framework governs the veterinary profession (see list in Annex 3). The board is a professional organization; it is mandated to ensure the respect of veterinary obligations imposed on its members and the strict observation of professional codes of conduct. With regard to animal health codes, the veterinary authority rests with the Ministry in charge of livestock. The Minister in charge of livestock authorizes the conduct/exercise of veterinary medicine and surgery.

Non-veterinarians are not allowed to work on a regular basis, even under the supervision of a veterinary surgeon. A private veterinarian can be mandated (but must respond to all requisitions) by the Minister to execute some sanitary tasks. Moreover, the Minister authorizes the private veterinarian and can grant a sanitary mandate to the latter under the authority of the national veterinary authority. The private veterinarian must be registered by the Veterinary Board. Only veterinary surgeons can diagnose, treat or do surgery on animals on a regular basis.

4.2.3 Registration and sale of livestock health products

Since 2006, UEMOA countries have adopted a regional framework for the registration and sale of livestock health products. There is no registration of veterinary products since 2011 at the country level; UEMOA directives are used for the registration of veterinary products by the regional commission. All DVS and the President of the regional committee of veterinary medicines establish the procedures on the authorization to sell, and the surveillance of, veterinary drugs. Member states must take all necessary administrative and legal steps (except for medicated feed) to ensure that veterinary medicines that are not registered do not circulate in the region. UEMOA experts meet four times per year. But the system is not working smoothly; less than 20% of dossiers have been registered. Products that are registered by the commission can circulate freely in the region. However, products that were registered in each member country before the establishment of the UEMOA Commission will continue to circulate until the end of 2014 in the respective countries. Many fake products found on the markets are said to be from neighbouring countries.

The DGSV authorises the importation of veterinary products. Dead vaccines can be imported by wholesalers, but live vaccines are only imported by the Government (e.g., for Rabies or PPCB). The Government makes these products available to State vets and mandated private vets. Farmers cannot treat animals, except for sporadic diseases. Farmers cannot buy veterinary drugs from wholesalers, but they go to a step lower; i.e., to stockists or retailers.

Table two: SUMMARY OF FINDINGS ON LIVESTOCK HEALTH PRODUCTS AND SERVICES BURKINA FASO

Livestock health products and services	Actors with legal recognition	Legal provision	Practice in place
Registration of livestock health products (drugs, vaccines and diagnostic kits) and pest control products.	Under UEMOA regulation, a natural or moral person can apply for authorization on the market.	Regulation No. 02/2006/CM/UEMOA outlines the procedures for authorization to sell/market and for supervision of veterinary drugs, and establishes a regional committee of veterinary medicine. Zatu No. AN VII-16 FP-PRES of 22 November 1989, Order No. 52 of ordinance No. 70/68 bis/PRES/MSP and Kiti No. AN vi 247/FP/SAN-S. Veterinary products can only be marketed after authorization by the Minister in charge of livestock through the DVS.	Products registered before 2006 in each country will circulate until the end of 2014. Products will have to be registered afresh under the UEMOA framework. The process is said to be long; only 20% of dossiers have been processed. Products registered in one country under UEMOA regulations/directives circulate in the region.
Importation of veterinary drugs, vaccines and diagnostic kits	In the case of a registered product, the head of the establishment holding the right to market as a wholesaler acting on behalf of the holder of the marketing authorization, or a responsible member of an establishment permitted to act as a wholesale distributor – for experimental products: registered company on behalf of the sponsor or the investigators.	Directive No. 07/2006/CM/UEMOA relative to veterinary pharmacy. The State takes all measures to ensure that only registered vet drugs circulate in the country . UEMOA experts meet four times per year; the system is not working smoothly; less than 20% of dossiers have been registered. Many fake products are on the markets from neighbouring countries.	Borders are porous and many fake products from Cameroon, China and India are found on the market. The DGSV authorizes the importation of veterinary products. Dead vaccines can be imported by wholesalers, but live vaccines can only be imported by the Government e.g. Rabies, PPCB. Government makes these products available to state vets and mandated private vets.
Distribution and sale of veterinary drugs, vaccines and diagnostic kits (<i>Who is allowed to prescribe, sell and/or administer</i>).	Pharmacists and veterinarians or in a case of a Company, the management must employ a pharmacist or veterinarian. Manufacturers and wholesalers can only sell veterinary drugs to authorized individuals, e.g., vets or retailers.	Directive No. 07/2006/CM/UEMOA relative to veterinary pharmacy. Decree No. 98-132/PRES/PM/MRA of 6 April 1998 relative to regulation of veterinary pharmacy. Farmers cannot buy from wholesalers, but they can buy from stockists or retailers.	Veterinarians are mainly representatives of multi-national companies. Farmers' organisations, NGOs and Government officials often possess and distribute veterinary products.
Sale of registered pesticide products (<i>Who is allowed to prescribe, sell and/or administer</i>).	Member states determine regulations for prescription and labelling for distribution/retail according to different categories; i.e., biologicals vs safe products.	Directive No. 07/2006/CM/UEMOA relative to veterinary pharmacy. Decree No. 98-132/PRES/PM/MRA of 6 April 1998 relative to regulation of veterinary pharmacy.	Private veterinarians are mainly representatives of multi-national companies. Farmers' organisations, NGOs and government officials often possess and distribute veterinary products.
Medication – treatment	Qualified vets and para-vets, under the supervision of vets	Kiti No. AN VIII-329 FP-AGRI-EL-SE-EL of 10 June 1991 creates the veterinary board known as Ordre National des Veterinaires (ONV). Zatu No. AN VII-16 FP-PRES of 22 November 1989 prescribes the conditions for authorization to exercise veterinary profession on private quality. Decree No. 96-130/PRES/PM/MARA on the code of deontology of veterinary profession. Decree No. 98/107/PRES/PM/MRA on attribution and exercise of sanitary veterinary mandate. Decree No. 98-00011/MRA on the abolition of competition from the public sector in the provision of goods and services to farmers.	Treatments are offered by veterinarians, veterinary para-professionals under the supervision of a vet, and animal owners (for non-sporadic diseases). CAHWs are not officially recognised; the Government uses technicians in place of CAHWs.

Livestock health products and services	Actors with legal recognition	Legal provision	Practice in place
Vaccinations	<p>Directorate of Veterinary Services.</p> <p>Qualified veterinarians and Veterinary para-professionals, under the supervision of a veterinary surgeon.</p> <p>Private vets with sanitary mandate</p> <p>Poultry vaccinators.</p>	<p>Zatu No. AN VII-0016/FP/PRES of 22 November and Law No. 23/94/ADP of 19 May 1994 on code of animal health.</p> <p>Kiti No. AN VII-0113/FP/AGR-EL of 22 November 1989 deals with authorisation and organisation to exercise veterinary profession on a private quality.</p> <p>Decree No. 98/107/PRES/PM/MRA on the attribution and exercise of sanitary veterinary mandates.</p> <p>Decree No. 98-00011/MRA on the abolition of competition from the public sector in the provision of goods and services to farmers. This is to protect sectors covered by a mandated private vet from competition from public vets who use government facilities.</p>	<p>Government officials organise vaccination campaigns in remote areas and where private vets do not have a mandate; Private vets with mandate often forget to report to the veterinary authority.</p> <p>Vaccinators and villagers who are trained for the control of some diseases, e.g., NDV.</p>
Clinical diagnosis and field diagnostics.	<p>Veterinary officers in the Department of Veterinary Services, veterinary surgeons, veterinary para-professionals (under the supervision of a vet surgeon), biologists.</p>	<p>Under the Animal Disease Act, veterinary officers obtain specimens from sick animals to ascertain the nature of a notifiable disease.</p> <p>Veterinary laboratories in the Ministry of Animal Resources provide laboratory confirmatory diagnosis to guide treatments and vaccination.</p>	<p>Clinical diagnosis is the principal form of diagnosis used in treatment of sick animals.</p> <p>The Central Veterinary Laboratory conducts routine diagnostics under the national disease surveillance framework.</p> <p>Field diagnostics kits can be imported with a visa for experimental trials, but for commercialization, national authorization is required.</p> <p>Public sector veterinary laboratories.</p>



4.3 Senegal

4.3.1 Disease control

The purpose of Decree No. 62-258 of 5 July 1962 was the establishment of operations of collective prophylaxis, mandatory inspection and health and safety of animal products and animal services performed by the State. By Decree No. 95-645 of 6 July 1995, these operations were entrusted to private veterinarians invested with a sanitary mandate. Furthermore, other legal arrangements on the establishment of the College of Veterinary Surgeons of Senegal and the code of animal health and the Code of Deontology of Veterinary Medicine have regulated the profession. The activities carried out by private veterinarian agents give rise to a remuneration to be borne by the State and farmers in a formula contained in Ministerial Order No. 11047 of 4 December 1995.

This Ministerial Order (No. 11047 of 4 December 1995) specifies that the sanitary mandate is awarded to veterinary doctors holding a licence to practise privately in veterinary medicine. They must be registered on the Roll of the veterinary doctors of Senegal and must not be employees of a company or any other structure. The sanitary mandate is aimed at performing collective prophylactic operations against priority diseases such as Rinderpest, contagious bovine pleuropneumonia (CBPP) and peste des petits ruminants (PPR).

A sanitary mandate may be assigned by the Minister in charge of livestock to those veterinary surgeons who request one, authorised by the Director of Livestock and following consultation with the Board of Veterinarians of Senegal. Each sanitary mandate is awarded for a period of one year, renewable without limit. The exercise of a sanitary mandate is for a specific territorial unit. It can be attributed to the same mandated veterinarian for one or more districts. However, the control of all activities in the field is under the responsible livestock departmental and regional authority. They ensure compliance with the technical requirements and programming. The immunity evaluation of a vaccine may be undertaken at any time on a sample freely chosen by the livestock services, through serological methods or by any other means deemed reliable.

The rates of remuneration received by the mandated officers when they are working on public diseases are set by the Minister in charge of Livestock, following

a proposal by the Director of Livestock and after consultation with the Board of the College of Veterinarians of Senegal. Remuneration of agents will be provided by the State and farmers, in proportions determined by the Minister of Livestock.

4.3.2 Registration of drugs and vaccines

Veterinary drugs are registered under the UEMOA system as for the whole region. The Government buys vaccines that are then allocated to mandated private vets. Farmers pay the mark up, which is determined by the Government. The Government orders vaccines from the veterinary laboratory, but also from private distributors and on the open market. Pricing has been a problem in the past; however, GALVmed (also in Mali) has facilitated cost-recovery training.

Only veterinary doctors on the Roll of the Order of Veterinary Doctors of Senegal, or pharmacists, may hold veterinary drugs for their assignment/sale to users or distribution without charge and retail. 'Veterinary medicines' are defined as any substance, preparation or composition presented as having properties for treating or preventing disease in animals, and any product that can be administered to animals with a view to making a medical diagnosis or to restoring, correcting or modifying organic functions. Additives with pharmacological properties, including those containing coccidiostats, antibiotics or growth factors, are also considered to be veterinary drugs.

Private and community veterinary medicines warehouses created by veterinary doctors for groups, cooperatives, companies or farmers associations, recognized by the legislation, are managed by veterinary surgeons in private practice, as well as by agricultural engineers working with livestock or livestock technicians. The veterinary drugs stored in the warehouses are issued to members of a group, cooperative, partnership or association for the exclusive exercise of their activities.

The transfer of veterinary drugs, free of charge or for a fee, is prohibited on public roads, fairs, markets, public places and public events, excluding in structures lawfully erected on these sites, to anyone, even the holder of a veterinary degree or a Doctor of Pharmacy. Any exclusive sales of veterinary drugs are prohibited; products that have been registered can be sold by any authorised person.

Any manufacturing establishment, or those dealing with the preparation, importation, packaging, and wholesale distribution of veterinary drugs, must be approved under the conditions laid down by decree (Decree No. 98-132/PRES/PM/MRA of 6 April 1998 relative to the regulation of veterinary pharmacy). Institutions must be managed technically by a veterinary surgeon or a pharmacist.

A commission has been established to advise on applications regarding the registration and marketing of veterinary medicines and medicated premixes. No veterinary medicinal product may be issued to the public if it has not received the prior authorisation issued by the Minister in charge of Livestock after approval by the Commission. The importer is required to exhibit proof of authorization for the veterinary medicinal product in its country of origin. In cases where the medicinal product is not used in the country of origin, a certificate of origin is required. Samples of each imported batch of veterinary drugs are taken for control.

The Minister of Livestock is responsible for the control of veterinary medicines in their manufacture, importation or distribution, both wholesale and retail. Veterinary inspectors are responsible for the control of veterinary drugs throughout the country.

4.3.3 Registration of animal health providers

The State has supported the development of the private sector (Law No. 92-52 of 10 July 1992) by establishing the College of Veterinary Doctors of Senegal. Decree No. 93-514 of 27 April 1993, on the Code of Ethics in veterinary medicine, and Decree No. 95-645 of 6 July 1995, establishing the sanitary mandate, further elaborate on the practise of the veterinary profession.

The practise of the veterinary profession has been extended to include professional qualifications in veterinary medicine, or veterinary doctors and agricultural engineers/technical officers (animal scientists, animal health technicians) who hold diplomas. Qualified foreigners recruited exclusively on behalf of private companies can also practise veterinary medicine after consulting the Board of the College of Veterinary Doctors of Senegal and gaining authorization from the Minister of Livestock. It also allows third-year students in veterinary schools to work as assistants to veterinary doctors, regularly practising medicine and surgery on animals.

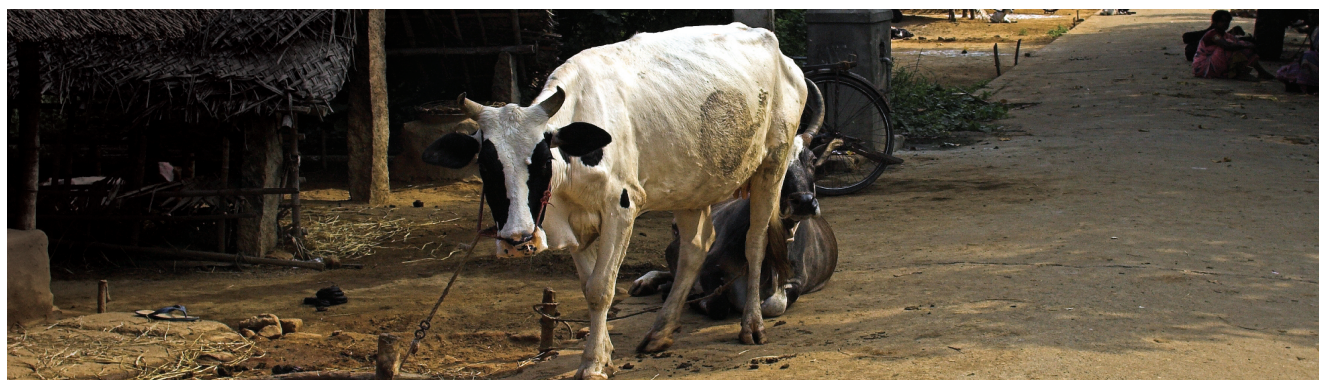
The authorization to engage in a temporary and revocable practice may be granted to foreign practitioners who hold a diploma recognized as equivalent, provided that the Senegalese Veterinary Doctors enjoy the same favour in the country of origin of those practitioners. Qualified African veterinarians can be registered with the Board on an exceptional level and can be exempted from the above requirement.

The practise of the veterinary profession in the public sector concerns veterinary doctors, who should devote their working time to the service of the State. Teaching duties and research are permitted under the conditions set by the regulations. The inspection of the veterinary profession is exercised under the authority of the Minister for Livestock. The practise of veterinary medicine does not constitute any act done by a student in veterinary sciences and medicine during their professional training under a veterinary doctor; or in the body of teaching science and veterinary medicine; or in a scientific research programme.



Table three: SUMMARY OF FINDINGS ON LIVESTOCK HEALTH PRODUCTS AND SERVICES SENEGAL

Livestock health products and services	Actors with legal recognition	Legal provision	Practice in place
Registration of livestock health products (drugs, vaccines and diagnostic kits) and pest control products.	Under UEMOA regulation, a natural or moral person can apply for authorization on the market.	Regulation No. 02/2006/CM/UEMOA procedures for authorization to market and supervision of veterinary drugs and establishing a regional committee of veterinary medicine. Veterinary products can only be marketed after authorization by the Minister in charge of livestock.	Products registered before 2006 will circulate until the end of 2014; products will need to be re-registered. The process is said to be long; only 20% of dossiers have been processed. Products registered in one country under UEMOA regulations/directives circulate in the region
Importation of veterinary drugs, vaccines and diagnostic kits.	In case of a registered product, the head of the establishment holding the right to market as a wholesaler acting on behalf of the holder of the marketing authorization, or a responsible member of an establishment permitted to act as a wholesale distributor – for experimental products: registered company on behalf of the sponsor or the investigators.	Directive No. 07/2006/CM/UEMOA relative to veterinary pharmacy. The State takes all measures to ensure that only registered vet drugs circulate in the country.	Key respondents have reported that control is tight and less than 10% of products are considered as counterfeits.
Distribution and sale of veterinary drugs, vaccines and diagnostic kits (<i>Who is allowed to prescribe, sell and/or administer</i>).	Pharmacists and veterinarians or, in a case of a Company, the management, must employ a pharmacist or veterinarian. Manufacturers and wholesalers can only sell veterinary drugs to authorized individuals or retailers/holders of a licence. Only veterinary doctors on the Roll of the Order of Veterinary Doctors of Senegal and pharmacists may hold veterinary drugs for their assignment/sale to users or for distribution and retail.	Directive No. 07/2006/CM/UEMOA relative to veterinary pharmacy.	Veterinarians are mainly representatives of multi-national companies. Farmers' organizations, NGOs, government officials often possess and distribute veterinary products.
Sale of registered pesticide products (<i>Who is allowed to prescribe, sell and/or administer medicines</i>).	Member states determine regulations for prescription and labelling, distribution/retail according to different categories, i.e. biologicals vs safe products. Only veterinary doctors on the Roll of the Order of Veterinary Doctors of Senegal and pharmacists may hold veterinary drugs for their assignment/sale to users, or for distribution and retail.	Directive No. 07/2006/CM/UEMOA relative to veterinary pharmacy. Decree No. 98-132/PRES/PM/MRA of 6 April 1998 relative to regulation of veterinary pharmacy. Law No. 92-52 of 26 June 1992 establishing the College of Veterinarians of Senegal.	Veterinarians are mainly representatives of multi-national companies . Farmers' organizations, NGOs, government officials often possess and distribute veterinary products. Farmers cannot buy medicines from the wholesalers, unless they are in a cooperative or a farmers' association.



Livestock health products and services	Actors with legal recognition	Legal provision	Practice in place
Medication/treatment	<p>Qualified vets and para-vets.</p> <p>Professional qualifications in veterinary medicine or veterinary doctor, agricultural engineers/ technical officers (animal scientists, animal health technicians). Qualified foreigners recruited exclusively on behalf of private companies.</p> <p>It also allows third-year students in veterinary schools to work as assistants to veterinary doctors.</p>	<p>Decree No. 95-645 of 6 July 1995 on the establishment of sanitary mandates.</p> <p>Ministerial Order No. 11047 of 4 December 1995 on the rules for practice of sanitary mandates in Senegal.</p> <p>The sanitary mandate is aimed at performing collective prophylaxis operations against the following diseases:</p> <p>Rinderpest, contagious bovine pleuropneumonia peste des petits ruminants.</p> <p>Law No. 92-52 of 26 June 1992 establishing the College of Veterinarians of Senegal.</p> <p>Law No. 2008-07 organizing the profession and the veterinary pharmacy in Senegal: the practice of veterinary profession is extended to non-veterinarians, e.g. agriculturists.</p>	<p>Treatments are offered by veterinarians, veterinary para-professionals, and animal owners (for non-sporadic diseases). CAHWs are not officially recognized; the Government uses technicians in place of CAHWs.</p>
Vaccinations	<p>Directorate of Veterinary Services.</p> <p>Qualified veterinarians and veterinary para-professionals under supervision of a veterinary surgeon.</p> <p>Private vets with a sanitary mandate.</p>	<p>Ministerial Order No. 11047 of 4 December 1995 on the rules for practice of sanitary mandates in Senegal. The sanitary mandate is aimed at performing collective prophylaxis operations against the following diseases:</p> <p>Rinderpest; contagious bovine pleuropneumonia; peste des petits ruminants.</p> <p>The control of all activities in the field is provided by the responsible livestock departmental and regional authority. They ensure compliance with the technical requirements and programming. An immune evaluation to the vaccine may be undertaken at any time on a sample freely chosen by the Livestock services, through serological methods or by any other means deemed reliable.</p>	<p>Government officials organize vaccination campaigns in remote areas and in areas where private vets do not have a mandate.</p>
Clinical diagnosis and field diagnostics.	<p>Veterinary officers in the Department of Veterinary Services.</p> <p>Veterinary surgeons and veterinary para-professionals.</p>	<p>Under the Animal Disease Act, veterinary officers obtain specimens from sick animals to ascertain the nature of a notifiable disease.</p> <p>Veterinary laboratories in the Ministry of Animal Resources provide laboratory confirmatory diagnosis to guide treatments and vaccination.</p>	<p>Clinical diagnosis is the principal form of diagnosis used in the treatment of sick animals.</p> <p>The National Veterinary Laboratory conducts routine diagnostics and research, which are separate from the vaccine production unit (produces approximately 30 different vaccines). Farmers can go directly to the laboratory for diagnostics. The laboratory is well equipped for the training of other labs in West Africa. It is a FAO regional reference laboratory. It works in collaboration with the National Veterinary Research Institute (NVRI)/ Vom (Nigeria).</p>

4.4 Mali

4.4.1 Disease control

The Director of Veterinary Services is empowered to control animal diseases and pests through various statutes. Law No. 05-010 of 11 February 2005 established the National Directorate of Veterinary Services, with a mission to develop the elements of the national policy in the areas of animal protection and veterinary public health, and to monitor and co-ordinate the implementation of the policy. Other legal arrangements are concerned with the organization and modalities of operation of the National Directorate of Veterinary Services (Decree No. 09-261/P-RM of 2 June 2009). The Inter-ministerial order No. 96-1367/MDRE-MFC-MATS-MJ of 9 September 1996, supplemented by Ministerial Order No. 97/1559/MDRE-MCF-MATS-MJ, prescribes the conditions for the granting, execution and removal of sanitary mandates. The sanitary mandate is granted by the Minister in charge of livestock; it concerns prophylactic work, surveillance and sanitary prophylactics. It is limited in general to a specific area. The mandated veterinarian reports to the Government veterinary service of the zone of intervention.

4.4.2 Registration and sale of livestock health products

Veterinary medicines are registered through the UEMOA structure. Farmers cannot buy medicines from the wholesalers; they need to go to the vets for all products. However, they can administer the products themselves, or use technicians. Besides UEMOA regulations and directives, there are different laws and decrees that are applied at country level. Law No. 01-062/of 4 July 2001 on veterinary pharmacy specifies the conditions on the establishment of a pharmaceutical company, or the import and export of veterinary products. Any establishment that prepares, imports, exports or sells veterinary products wholesale (vaccines, medicines and diagnostics) must be the property of a registered veterinarian, or of a pharmacist, or of a company managed by a registered veterinarian or pharmacist.

Both the Ministry of Health and the Ministry of Livestock are concerned by this decree and officials from these ministries ensure the control and inspection of veterinary pharmaceutical establishments and the recognition of the corresponding offences, seizure and confiscation.

Except for products that are imported for research or distributed free of charge (for which the Minister in charge of livestock gives authorisation), the rest of the

process is under the Ministry of Health, including the registration of veterinary drugs. A commission has been instituted under the Ministry of Health. It appears that the veterinary profession is not adequately represented in the Commission; only the DVS and the President of the Veterinary Board are amongst the 13 members. In case of emergency/endemic priority diseases, there is a dispensation waiving the prerequisite to register a product before it is imported.

Regarding the sale and distribution of veterinary products, one of the key achievements of the PARC programme was to have farmers pay for vaccinations. This makes the market favourable for private veterinarians to operate. In some cases, vaccines are distributed free of charge by the Government through actors in the veterinary system such as private wholesalers (except for live vaccines), private veterinarians with sanitary mandates and some NGOs, e.g., VSF, ICRC. The prices of some vaccines are fixed by the Government; most of these have not been revised for the last 25 years.

The Central Veterinary Laboratory (LCV) was established as a national public institution, an autonomous administrative institution. Its mandate includes diagnostics, research, vaccine production and the training of laboratory personnel. Surveillance falls under the DVS; however, the LCV plays a key role in sample analysis to confirm diseases. It is funded by the Government, but also by the sale of vaccines, external funding and diverse aid and contracts, etc. The LCV exports vaccines to other countries.

4.4.3 Registration of veterinarians and veterinary para-professionals

The profession is organized as depicted in legal documents, including the Law on the establishment of the National Order of the veterinary profession (Law No. 88-45/AN-RM of 6 May 1988); the Decree on the organization to exercise the veterinary profession in a private capacity (Decree No. 313/PG-RM of 2 October 1986); and the Act on the authorization of work as a private veterinarian in the veterinary profession (Act No. 26 86-64/AN-RM of July 1986).

There is a strong presence of NGOs in the country. They utilize the services of trained technicians and animal health auxiliaries (also referred to as CAHWs in other countries). The International Committee of the Red Cross (ICRC) is highly active in Mali. The ICRC is a big player in the country, mainly in desert areas. However, there are clashes between these NGOs and private vets because NGOs provide veterinary services and drugs free of charge.

Table four: SUMMARY OF FINDINGS ON LIVESTOCK HEALTH PRODUCTS AND SERVICES MALI

Livestock health products and services	Actors with legal recognition	Legal provision	Practice in place
Registration of livestock health products (drugs, vaccines and diagnostic kits) and pest control products.	Under UEMOA regulations, a natural or moral person can apply for authorization in the market.	Regulation No. 02/2006/CM/UEMOA, procedures for authorization in the market and supervision of veterinary drugs, and establishing a regional committee of veterinary medicine. Law No. 01-062 of 4 July 2001 on veterinary pharmacy. Decree No. 01-341/P-RM of 9 August 2001, fixing the application procedures of Law No. 01-062 of 4 July 2001 governing veterinary pharmacy.	Products registered before 2006 will circulate until the end of 2014. The process is said to be long; only 20% of dossiers have been processed. Products registered in one country under UEMOA regulations/directives circulate in the region.
Importation of veterinary drugs, vaccines and diagnostic kits.	In the case of a registered product, the head of the establishment holding the right to market as wholesaler, acting on behalf of the holder of the marketing authorization; or a responsible member of an establishment permitted to act as a wholesale distributor. For experimental products: a registered company on behalf of the sponsor or the investigators.	Directive No. 07/2006/CM/UEMOA relative to veterinary pharmacy. The State takes all measures to ensure that only registered veterinary drugs circulate in the country. Law No. 01-062 of 4 July 2001 on veterinary pharmacy. Decree No. 01-341/P-RM of 9 August 2001, fixing the application procedures of Law No. 01-062 of 4 July 2001 governing veterinary pharmacy.	Borders are porous and many fake products from Cameroon, China and India are found on the market.
Distribution and sale of veterinary drugs, vaccines and diagnostic kits (<i>Who is allowed to prescribe, sell and/or administer</i>).	Pharmacists and veterinarians or, in a case of a company, the management, must employ a pharmacist or veterinarian. Manufacturers and wholesalers can only sell veterinary products (vaccines, medicines, diagnostics) to authorized individuals or retailers.	Directive No. 07/2006/CM/UEMOA relative to veterinary pharmacy. Law No. 01-062/ of 4 July 2001 on veterinary pharmacy. Decree No. 01-341/P-RM of 9 August 2001, fixing the application procedures of Law No. 01-062 of 4 July 2001 governing veterinary pharmacy	Veterinarians are mainly representatives of multi-national companies. Farmers' organisations, NGOs and Government officials often possess and distribute veterinary products.
Sale of registered pesticide products (<i>Who is allowed to prescribe, sell and/or administer</i>).	Member states determine regulations for prescription and labelling for distribution/ retail according to different categories; i.e., biologicals vs safe products	Directive No. 07/2006/CM/UEMOA relative to veterinary pharmacy. Decree No. 01-341/P-RM of 9 August 2001, fixing the application procedures of Law No. 01-062 of 4 July 2001 governing veterinary pharmacy.	Veterinarians are mainly representatives of multi-national companies. Farmers' organisations, NGOs and Government officials often possess and distribute veterinary products. Sworn officials from the Ministry of Livestock ensure the control and inspection of veterinary pharmaceutical establishments and the recognition of the corresponding offences, seizure and confiscation.

Livestock health products and services	Actors with legal recognition	Legal provision	Practice in place
Medication/treatment	Qualified vets and para-vets	<p>Inter-ministerial Order No. 96/1367/MDRE-MFC-MATS-MJGS on the conditions for granting, execution and withdrawal of sanitary mandates.</p> <p>Inter-ministerial Order No. 97/1559/MDRE-MFC-MATS-MJ, supplementing the provisions of the Inter-ministerial Order No. 96/1367/MDRE-MFC-MATS-MJGS on the conditions for granting, execution and withdrawal of sanitary mandates.</p>	Treatments are offered by veterinarians, veterinary para-professionals and animal owners (for non-sporadic diseases). CAHWs are recognized; NGOs are very active in the country.
Vaccinations	<p>DVS within the Ministry of Animal Resources.</p> <p>Director General of Central Veterinary Laboratory (LVC) for vaccine production.</p> <p>Qualified veterinarians and Veterinary para-professionals.</p> <p>Veterinary surgeon holding a sanitary mandate.</p>	<p>Law No. 94-027/94 of 30 April 1994 creates the Central Veterinary Laboratory (LVC).</p> <p>Decree No. 94-266/P-RM setting out the operating procedures of the LVC.</p> <p>Decision No. 05/0092/MEP-SG of 2 September 2005 on the internal organization and modalities of the functioning of the Central Veterinary Laboratory.</p> <p>Ministerial Order No. 96/1367/MDRE-MFC-MATS-MJGS relative to conditions for granting, execution and withdrawal of sanitary mandates.</p>	<p>Government officials organize vaccination campaigns. Most of the vaccinations are free of charge.</p> <p>Difficult for private vets to operate, since vaccine costs are low.</p>
Clinical diagnosis and field diagnostics	<p>Director General of Central Veterinary Laboratory (LVC).</p> <p>Veterinary officers in the Department of Veterinary Services for disease surveillance.</p>	<p>Law No. 94-027/94 of 30 April 1994 creates the Central Veterinary Laboratory.</p> <p>Decision No. 05/0092/MEP-SG of 2 September 2005 on the internal organization and modalities of the functioning of the Central Veterinary Laboratory.</p>	<p>The LVC does all the tests free, except for tests for CBPP and Brucellosis, which are paid for by farmers. Field diagnostic kits are not available.</p> <p>Laboratory diagnostics are done free of charge.</p> <p>Clinical diagnosis is the principal form of diagnosis used in the treatment of sick animals.</p> <p>Public sector veterinary laboratories.</p>



4.5 Nigeria

4.5.1 Disease control

The Director of Veterinary Services is empowered to control animal diseases and pests through various statutes. The Animal Diseases (control) Act No. 10 of 1988 empowered the Federal veterinary services. Many legislation and regulatory documents exist at State level, but they need to be updated.

4.5.2 Registration and sale of livestock health products

All drugs and medicines manufactured, imported, stored or advertised for sale in Nigeria must be registered with the National Agency for Food and Drug Administration and Control (NAFDAC). The NAFDAC Act Cap LFN No. 1, 2004 defines the mandate of the Agency. The Agency ensures that all registered products conform to acceptable standards of quality, safety and efficacy. The Agency is also mandated to enforce the registration of all human and veterinary drugs. The Agency is vested with legislative (rule-making), administrative (licensing) and adjudicatory (revocation of powers and sanctions) powers.

The National Veterinary Research Institute at Vom was established in 1924. It has the mandate to conduct research on all aspects of animal diseases and develop and produce animal vaccines, sera and biologicals, together with surveillance and diagnosis of animal diseases and the provision of extension services and the training of intermediate veterinary and medical laboratory personnel. Its activities include: collaboration with various partners on Porcine cysticercosis in rural North Central Nigeria; upgrading the current infrastructure to increase the production of an NDV I-2 vaccine (as a pilot laboratory in the scaling up of NDV I-2 programmes in Africa); working towards the control of CBPP by re-evaluating the use of antimicrobials in its treatment and control; and working against contagious caprine pleuropneumonia (CCPP) by participating in the development of a robust improved process for the production of a vaccine.

Vaccines registered by NAFDAC are always available, but there is strong competition from some cheap vaccines from India and China. The Government sometimes provides PPR vaccines but, generally, vaccination campaigns do not cover all areas; this interferes with private vets' sanitary mandates. The Federal veterinary service can decide when a vaccination campaign should be held and different states (DVS) have the autonomy to start when they are ready.

4.5.3 Registration of veterinarians and veterinary para-professionals

The profession is organised under the Veterinary Council of Nigeria (VCN) and the Nigerian Veterinary Medical Association (NVMA). The veterinary statutory body has legal authority over veterinarians and veterinary para-professionals across the whole of the veterinary services. The public sector of the veterinary service has the authority and capability to accredit/authorise/delegate to the private sector, but there are currently no accreditation/authorisation/delegation activities. The National Committee for Privatisation of Veterinary Services has been put in place; it will look at the delimitation of the sanitary mandate areas and the general rules thereof.

The Veterinary Council of Nigeria (VCN) Act has been updated. The VCN is well funded, but it is not very active, according to private vets. According to Government officials, there are about 7,000 vets in Nigeria; but according to the Veterinary Association, only 4,000 are registered with the Association, of whom 1,000 are in teaching and research; 2,000 are in Federal/State/local government; and only about 1,000 are involved in real veterinary work (80% depending on other vets).

Although the veterinary services have been privatized, there is no strict sanitary mandate in place. Most private vets are localized in big cities, except for a few who are involved in community-oriented work (e.g., the Poultry Network) and in private extension services in rural areas. The Government can contract them for vaccination. Although the veterinary service delivery was free until 1994, farmers are now willing to pay for services/vaccines, e.g. for CBPP. A private veterinary sector is in place. Private veterinarians are mainly involved in the supply and distribution of veterinary drugs, vaccines, equipment and livestock feeds, and in the provision of routine clinical services, preventative care for livestock and consultancy services. Private veterinarians do not have strong links with public veterinarians in many states; hence they report diseases as they wish, or according to acquaintances. There are conflicts between vets and other livestock workers on responsibilities at different levels; however, CAHWs are empowered and do get syllabuses from the Veterinary Council.

Table five: SUMMARY OF FINDINGS ON LIVESTOCK HEALTH PRODUCTS AND SERVICES NIGERIA

Livestock health products and services	Actors with legal recognition	Legal provision	Practice in place
Registration of livestock health products (drugs, vaccines and diagnostic kits) and pest control products.	National Agency for Food and Drug Administration and Control (NAFDAC). There is a directorate of veterinary products and biologicals within the NAFDAC (since 2013). However, a conflicting situation persists within NAFDAC between pharmacists and veterinarians for control of registration of veterinary remedies, especially biologicals.	NAFDAC Act of 1988 sets the standards of quality, safety and efficacy; registration of all human and veterinary drugs; legislative, administrative and adjudicatory powers.	The registration of veterinary products is done through the National Agency for Food and Drug Administration and Control (NAFDAC). The process can take one month; once registered the product can be imported by anyone.
Importation of veterinary drugs, vaccines and diagnostic kits.	Registered pharmacists and veterinarians. Registered enterprises/companies.	NAFDAC Act of 1988: NAFDAC has a mandate to regulate the registration and distribution of drugs, including veterinary medicines in Nigeria. Official ports of entry for medicines are airports.	Borders are porous and many fake products, manufactured or from neighbouring countries, China and India, are on the market. Veterinary products can be imported by anyone, including non-vets, although there is exclusivity in the country. Import exclusivity in the ECOWAS region is possible, on the understanding that the agent becomes the main contact for a specific product.
Distribution and sale of veterinary drugs, vaccines and diagnostic kits (<i>Who is allowed to prescribe, sell and/or administer</i>).	Registered pharmacists and veterinarians.	NAFDAC has a mandate to regulate the registration and distribution of drugs, including veterinary medicines, in Nigeria. Federal and State veterinary services.	NAFDAC has no capacity for the control of veterinary products (vaccines, medicines, diagnostics) due to lack of qualified personnel; a specialized training is required for vaccine registration. Veterinarians are mainly representatives of multi-national companies. Farmers' organisations, NGOs and Government officials often possess and distribute veterinary products.
Sale of registered pesticide products (<i>Who is allowed to prescribe, sell and/or administer medicines</i>).	Registered pharmacists and veterinarians.	NAFDAC has a mandate to regulate the registration and distribution of drugs, including veterinary medicines, in Nigeria. Federal and State veterinary services.	NAFDAC has no capacity for the control of veterinary products. Veterinarians are mainly representatives of multi-national companies . Farmers' organizations, NGOs and Government officials often possess and distribute veterinary products.
Medication – treatment.	Qualified vets and para-vets.	Veterinary Surgeons' Law, 1992	Treatments are offered by veterinarians, veterinary para-professionals, and animal owners (for non-sporadic diseases). CAHWs are officially recognised; the Veterinary Board determines the curriculum for CAHWs.
Vaccinations	Federal, State and private vets; CAHWs.	The Animal Diseases (control) Act No. 10 of 1988 (Federal veterinary services) and State National Veterinary Research Institute mandated to produce vaccines.	Federal Government organizes vaccination campaigns, but States are autonomous (can decide on different dates and regimes). Mass vaccination campaigns for PPR and CBPP are organized. A network of rural poultry farmers put in place by a private vet was reported as a good model for sustainable ND vaccination.
Clinical diagnosis and field diagnostics.	Federal, State and private vets.	National Veterinary Research Institute mandates for diagnostics of TADs. Besides the National Veterinary Research Institute (NVRI), there are Regional and local labs, e.g.: veterinary teaching hospitals (Ibadan, ABU, Nsukka, Maiduguri and Sokoto); NVRI zonal labs; State labs and other private labs (Animal Care Services, Ibadan; Diversay Solutions Ltd, Lagos).	Clinical diagnosis is the principal form of diagnosis used in the treatment of sick animals. Public sector veterinary laboratories.

4.6 Ghana

4.6.1 Disease control

The Director of Veterinary Services (Chief Veterinary Officer) is empowered to control animal diseases and pests through various statutes. The Diseases of Animals Act, 1961 gives power to the Minister to declare infected areas and isolation of such areas and animals; and to the Minister of Finance to authorise compensation. It also describes the power of the Veterinary Authority for the whole country in terms of inspection, inoculation, treatment, dipping etc. Veterinary guards, under the control of the CVO, are employed for prevention and detection of offences and the apprehension of offenders against the Act. It is, however, old and needs to be updated.

4.6.2 Registration and sale of livestock health products

The Pharmacy and Drugs Act, 1961 controls all pharmaceuticals. The Food and Drugs Law, 1992 and the Pharmacy Act, 1994 provide the legal framework for the registration and control of pharmaceutical activities. The Food and Drugs Law ensures that only registered drugs may be sold, and only registered inspection officers appointed under the Pharmacy Act can make regular inspections of premises to establish whether the dispensing operations of the Act, and the granting and renewal of licences, are being satisfied in all respects.

The scientific requirements for registration include data on quality, clinical efficacy and safety. In addition, the registration holder must keep accurate records of drug distribution, which must be available for inspection. The Veterinary Services Department (VSD) issues permits for the importation and sale of all categories of veterinary drugs. Sales and distribution of veterinary products (vaccines, medicines and diagnostics) are conducted by the private sector. However, vaccine sales and distribution are still controlled by the VSD.

4.6.3 Registration of veterinarians and veterinary para-professionals

The Veterinary Surgeons' Law, 1992 established the Veterinary Council of Ghana and outlines the functions of the Council and duties of the registrar, amongst other arrangements. The Council is concerned with veterinary practice and the practitioner and is responsible for securing the highest standards.

In particular, it prescribes standards of professional conduct and ethics for practitioners, upholds and enforces professional standards and maintains and publishes a register of practitioners. It also regulates the practise of veterinary medicine and the improvement of veterinary services in the country. However, many sections are outdated; for instance, fines are expressed in the old value of the Cedis (up to the equivalent of USD250,000, if applied as it is now).

The Veterinary Medical schools were not opened in Ghana until 2009. The Animal Health and Production College trained para-professionals, following World Bank recommendations on structural adjustment; training of veterinarians ceased in the 1990s. There is a large gap in human capacity, with mostly older and retired vets called back to work. The PACE programme built the capacity of the existing veterinarians in disease control, but did not seek to train new veterinarians to fill the gap. In 2009, two veterinary medical schools were opened, at the University of Ghana and at the Kwame Nkrumah University of Science and Technology. Only 20 vets will qualify in 2015 from these veterinary schools.

Private vets are in big towns; they are involved in companion animal clinics and in the sale of veterinary products. The new law on the privatization of veterinary services will imply that State vets will have to withdraw from some activities. Private vets can import animal health products and equipment, except live vaccines that are part of the DVS mandate. Ordinary business people can employ veterinarians. It seems that almost the same products have been used for many years, and the introduction of Chinese products on the market in recent years has worsened the drug resistance and pharmacovigilance status.

CAHWs work in remote communities in the regions; they are not paid by livestock farmers for services rendered and they are not included in Government structures, nor are they recognised by the Veterinary Council of Ghana. CAHWs were introduced by the World Bank under privatisation, but the system did not also work in sedentary areas, where some worked up to the level of full vets.

Table six: SUMMARY OF FINDINGS ON LIVESTOCK HEALTH PRODUCTS AND SERVICES GHANA

Livestock health products and services	Actors with legal recognition	Legal provision	Practice in place
Registration of livestock health products (drugs, vaccines and diagnostic kits) and pest control products.	Pharmacists and veterinarians. Food and Drugs Authority (FDA)	Pharmacy and Drugs Act 1961. Food and Drugs Law, 1992. Pharmacy Act, 1994. Public Health Act, 2012.	The Pharmacy Board is legally responsible for the registration of human and veterinary products. However, veterinarians are not well represented on the Board. This has been shown by OIE Gap Analysis reports as a weak arrangement, because the registration of some veterinary products such as vaccines is specialized work requiring specialized training.
Importation of veterinary drugs, vaccines and diagnostic kits.	Any moral and legal person with an import licence. The Veterinary Services Department (VSD) issues permits for the importation and sale of all categories of veterinary drugs. Sales and distribution are conducted by the private sector. However, vaccine sales and distribution are still controlled by the VSD.	Pharmacy and Drugs Act 1961. Food and Drugs Law, 1992. Pharmacy Act, 1994.	Borders are porous and many fake products are found on the market.
Distribution and sale of veterinary drugs, vaccines and diagnostic kits (<i>Who is allowed to prescribe, sell and/or administer</i>).	Registered enterprises/ companies. Vets and pharmacists. Registered inspectors. The Veterinary Services Department (VSD) issues permits for the importation and sale of all categories of veterinary drugs. Sales and distribution are conducted by the private sector. However, vaccine sales and distribution are still controlled by the VSD.	Pharmacy and Drugs Act 1961. Food and Drugs Law, 1992. Pharmacy Act, 1994. Government attempts to get all vaccines under its control; hence vaccines bought by the Government go to the regions and districts.	Veterinarians are mainly representatives of multi-national companies. Farmers' organizations, NGOs and Government officials often possess and distribute veterinary products.
Sale of registered pesticide products (<i>Who is allowed to prescribe, sell and/or administer medicines</i>).	Registered enterprises/ companies. Vets and pharmacists. Registered inspectors.	Pharmacy and Drugs Act 1961. Food and Drugs Law, 1992. Pharmacy Act, 1994.	Veterinarians are mainly representatives of multi-national companies. Farmers' organizations, NGOs and Government officials often possess and distribute veterinary products. There are many counterfeit products on the market, seemingly from Cameroon, China and India.
Medication – treatment.	Qualified vets and para-vets. CAHWs are recognized.	Veterinary Surgeons Law, 1992.	Treatments are offered by veterinarians, veterinary para-professionals, and animal owners (for non-sporadic diseases). CAHWs are recognized, but not sufficiently remunerated by the farmers or organizations employing them.

Livestock health products and services	Actors with legal recognition	Legal provision	Practice in place
Vaccinations	<p>Directorate of Veterinary Services.</p> <p>The Central Veterinary Laboratory at Pong Tamale and the Accra Veterinary Laboratory have the mandate to produce vaccines.</p> <p>Qualified veterinarians and veterinary para-professionals, under the supervision of a veterinary surgeon.</p>	Diseases of Animals Act, 1961.	<p>Legally, the Government should use private vets for vaccination, but public vets still do it and this creates conflicts of interest.</p> <p>Government partially conducts vaccination campaigns.</p> <p>Many NGOs involved.</p> <p>The Central Veterinary Laboratory is well equipped for the production of NDV vaccine I-2.</p>
Clinical diagnosis and field diagnostics	<p>Veterinary officers in the Department of Veterinary Services.</p> <p>Veterinary surgeons and veterinary para-professionals.</p>	<p>Under the Diseases of Animals Act, 1961, veterinary officers obtain specimens from sick animals to ascertain the nature of a notifiable disease.</p> <p>Veterinary laboratories in the Ministry of Food and Agriculture provide laboratory confirmatory diagnosis to guide treatments and vaccination.</p>	<p>Clinical diagnosis is the principal form of diagnosis used in the treatment of sick animals.</p> <p>Routine diagnostics and research are done by the Accra Veterinary Laboratory, which is a regional reference laboratory. It has only two vets but has very good equipment, allowing training for other countries; e.g. training of DR Congo in the production of 12 vaccines. The lab can produce up to 500 million NDV I-2 vaccines per annum. The vet lab also carries out some quality control for human medicines. The Rural Poultry Network within the lab has been functional; farmers have been trained to vaccinate.</p>





4.7 Cameroon

4.7.1 Disease control

The priority diseases are rabies, Lumpy Skin Disease, PPCB, PPR and anthrax. The Director of Veterinary Services is empowered to control animal diseases and pests through various statutes. The DVS is responsible for the development, implementation and monitoring of the public policy on health protection and veterinary public health. However, the Provincial Delegation does not fall under the authority of the DVS. Hence, the disease reporting system is sometimes compromised by the effectiveness of the relationships between these different structures.

4.7.2 Registration and sale of livestock health products

Decree No. 83/661 of 1983 (on Medicine and Poisons) and Law No. 2000/018 of 19 December 2000 (on the regulation of veterinary pharmacy) regulate the delivery system for veterinary products. The most recent Order No. 178/CAB/PM of 5 December 2008 determines the establishment, organization and functioning of the Commission that reviews the records of request for authorization to market veterinary medicines. These laws promote professionalism in veterinary pharmacy; determine the rules on the installation of practitioners to meet adequately the demands of farmers; set an appropriate legal framework for the industrial preparation, sale and distribution of veterinary medicines; fix the conditions governing imports of veterinary drugs and their placing on the market; and specify the legal provisions against smuggling, counterfeiting and all irregular practices in the field.

This legal framework only allows veterinarians to import, sell and to operate as wholesalers of veterinary products. However, some vets are used by non-professionals to operate under their names. The Pharmacy Law (Law 2000/018 of 19 December 2000) has not been fully applied. The biggest challenge is a lack of personnel dedicated to veterinary legislation in the Ministry; there are only two officials appointed to receive and treat dossiers before a registration commission is organized. Only one session has been organized since the beginning of 2013, though dossiers have been submitted. Counterfeit products are a serious problem. Anyone can get an import permit; the DVS has no control mechanisms. No registration is required for diagnostic kits.

4.7.3 Registration of veterinarians and veterinary para-professionals

The veterinary profession is regulated by Decree No. 54/1053 of 18 August 1984 on the Code of Conduct for the veterinary profession, and by Law No. 90/033 of 1990 of 10 August 1990 on the organization of the veterinary profession. Private vets apply directly from the council and choose their area/location; there is no exclusivity for a specific area; more than one vet can work in the same area. About 400 vets in the country, of whom 50 are in the private sector, are involved mostly in companion animal medicine and the sale of veterinary products. There is a lack of interest in the profession due to low status, but with the two veterinary schools (ESMV at the University of Gaoundere, starting in 2014 and another at the Université des Montagnes), it can be assumed that the profession will recover its status. Para-vets do register with the Veterinary Council but CAHWs are not recognized. In Cameroon in particular, it was suggested that GALVmed should try to empower the existing veterinary service, rather than use structures outside the Government.

Table seven: SUMMARY OF FINDINGS ON LIVESTOCK HEALTH PRODUCTS AND SERVICES CAMEROON

Livestock health products and services	Actors with legal recognition	Legal provision	Practice in place
Registration of livestock health products (drugs, vaccines and diagnostic kits) and pest control products.	Only pharmacists and registered veterinarians.	Decree No. 83/661 of 1983 on Medicine and Poisons; and Law No. 2000/018 of 19 December 2000 on the regulation of veterinary pharmacy.	Veterinarians are mainly representative of multi-national companies.
Importation of veterinary drugs, vaccines and diagnostic kits.	Registered enterprises employing veterinarians/ pharmacists, pharmacists and private veterinarians.	Decree No. 83/661 of 1983 on Medicine and Poisons; and Law No. 2000/018 of 19 December 2000 on the regulation of veterinary pharmacy.	Private Veterinarians are mainly representative of multi-national companies. Almost anyone can import (fraudulently). Rules are not properly enforced due to lack of capacity in medicine control. There are many fake products on the market.
Distribution and sale of veterinary drugs, vaccines and diagnostic kits (<i>Who is allowed to prescribe, sell and/or administer</i>).	Registered enterprises employing veterinarians/pharmacists, pharmacists and private veterinarians.	Decree No. 83/661 of 1983 on Medicine and Poisons; and Law No. 2000/018 of 19 December 2000 on the regulation of veterinary pharmacy.	Veterinarians are representatives of multi-national companies. Some enterprises use corrupt veterinarians' names as distributors. Many fake products are imported; there are street vendors.
Sale of registered pesticide products (<i>Who is allowed to prescribe, sell and/or administer medicines</i>).	Registered enterprises employing veterinarians/ pharmacists, pharmacists and private veterinarians.	Decree No. 83/661 of 1983 on Medicine and Poisons; and Law No. 2000/018 of 19 December 2000 on the regulation of veterinary pharmacy.	Veterinarians are representatives of multi-national companies. Some enterprises use corrupt veterinarians' names as distributors. Many fake products are imported; there are street vendors. Farmers have access to all products without prescriptions.
Medication/ treatment	Vets and para-vets; farmers can treat general conditions.	Decree No. 2000/152 of 4 May 2005 on the organization of the Ministry of Livestock, Fisheries and Animal Industries. Law No. 90/033 of 1990 of 10 August 1990 on the organization of the veterinary profession. Law No. 2000/017 of 19 December 2000 regulating veterinary health inspection.	Private vets are mainly involved in pet clinics and sale of veterinary drugs. State vets are also involved in clinics. Farmers can acquire the services of any livestock service providers, or carry out treatment themselves.
Vaccinations	LANAVET has the mandate to produce vaccines. Veterinary officers in the Department of Veterinary Services ensure vaccination campaigns. Private vets can also vaccinate, as can para-vets under supervision.	Decree No. 2000/152 of 4 May 2005 on the organization of the Ministry of Livestock, Fisheries and Animal Industries .	The sanitary mandate is not working well, although it has started to be implemented in two regions. The zoning process was not supported by the Ministry, since only busy areas were demarcated for private vets. Every year in July, the Minister launches a rabies vaccination campaign. However, this campaign does not cover the whole country; hence, it is difficult for private vets to operate. For instance, rabies vaccine is bought for 60 F CFA but the Government has fixed the price this year to 85 F CFA, which is lower than the necessary amount to make a profit. NCD vaccinations are done in rural areas, but they are not profitable for private veterinarians. The Government still provide free vaccinations (low coverage). Private vets are not interested in vaccination campaigns; no financial benefits. LANAVET has opened a subsidiary lab in Yaounde to provide clinical diagnosis.
Clinical diagnosis and field diagnostics.	Veterinary officers in the Department of Veterinary Services. Veterinary surgeons, veterinary para-professionals, biologists.	Under the Animal Disease Act, veterinary officers obtain specimens from sick animals to ascertain the nature of a notifiable disease. Veterinary laboratories in the Ministry of Livestock, Fisheries and Animal Industries provide laboratory confirmatory diagnosis to guide treatments and vaccination.	Clinical diagnosis is the principal form of diagnosis used in the treatment of sick animals. Public sector veterinary laboratories.

5 Conclusions

Interviews were held with Chief Veterinary Officers or Designates in all the countries. In DR Congo, Mali and Cameroon, the veterinary services have a central component in charge of policy and regulations and a decentralized component operating under local or regional government in charge of service delivery. Disease control operations under local government are weak, and the linkage to central government is ineffective and presents a challenge to the chain of command of the veterinary administration. Private veterinary practice is weak in DR Congo, Cameroon and Ghana. Burkina Faso and Senegal have a strong private veterinary sector, supported by an efficient sanitary mandate. Except for DR Congo and Ghana, veterinary services are supported by a sound legal framework but, due to lack of funding and political will in some countries, the implementation is inadequate. Ghana lacks the capacity for veterinary service delivery, due to the non-existence of veterinary medical schools for training and of veterinarians, and a long moratorium on the recruitment of veterinary personnel in the early 1990s. However, with the opening of two veterinary medical schools, at the University of Ghana and at the Kwame Nkrumah University of Science and Technology, the situation could improve in the near future.

DR Congo has no Veterinary Board; the Veterinary Association is a membership organisation that has no regulatory mandate. The Government still controls the veterinary boards in Cameroon and Mali. Private veterinary practice is not regulated in DR Congo and is weak in Cameroon and Ghana. In most of the countries where the private veterinary sector is present, it is confined to urban and peri-urban areas and is mostly in pet medicine and the sale of veterinary products. However, Burkina Faso, Nigeria and Senegal have very powerful and well-organised private veterinary sectors.

In DR Congo and Cameroon, the veterinary profession is not very well organised. Legislation for this exists, but it is not well implemented or enforced. Although the registration process for veterinary products and field diagnostics used in the UEMOA region is recommendable, it requires review in light of the delays noted in acquiring authorisation for the registration of veterinary products.



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ANNEX 1: Category of Interviewees

	Categories of interviewees	DR Congo	Burkina Faso	Senegal	Mali	Cameroon	Ghana	Nigeria
1	Government/ public sector – veterinary services/ public vets	√	√	√	√	√	√	√
2	Veterinary Boards/ Veterinary Councils	ND	√	√	√	√	√	√
	Veterinary Associations	√	√	√	√	√	√	√
3	Private vets and para-vets (individuals)	ND	√	√	√	√	√	√
4	Non-Governmental organizations (NGOs)	ND	ND	√	ND	ND	√	√
5	Livestock producers/ Farmers	√	√	ND	ND	√	√	√
6	Distributors of livestock health products	√	√	√	√	√	√	√
7	Vaccine manufacturers	√	√	ND	√	√	√	√
8	GALVmed partners	ND	√	ND	ND	√	ND	ND

ANNEX 2: Key respondents interviewed

DR CONGO

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ANNEX 3: List of legislations for delivery of livestock health products and services

Country	Delivery of livestock health services	Regulatory of livestock health products	Remarks
DR Congo	Decree of 28 July 1938 on Livestock Disease control.		Gave power to the then Governor of the colony to control animal diseases and defines control measures for disease outbreaks; the Ministry in charge of livestock is now the custodian.
	Decree-law 111		On the organisation of power in Government; the Ministry in charge of Livestock is responsible for veterinary services and product delivery systems.
	Decree No. 25/2001 of 14 April 2001		On nominating the members of the Government – Ministry of Agriculture, Livestock and Fisheries.
	Act of 1981 on creation of the Association of veterinary surgeons.		Voluntary Membership; no regulating power.
		Pharmacy Act	Deals with registration, import and use of human and veterinary products.
		Office Congolais de Control (OCC)	Has the mandate for quality control.
	Order on creation of the National Service for Veterinary and Livestock Inputs (Service National d'Intrants Vétérinaires et d'Élevage).		Responsibility for <ul style="list-style-type: none"> acquiring/stocking of veterinary products and distribution to farmers. inspection of veterinary outlets and pharmacies
Burkina Faso	Decree No. 09/261/P-RM of 2 June 2009		On the modalities of operation of the National Direction of Veterinary Services.
	Decree No. 09/265/P-RM of 2 June 2009		Determining the structure of the National Direction of Veterinary Services.
		Directive No. 07/2006/CM/UEMOA	Relative to veterinary pharmacy, defining necessary administrative and legal steps for registration of veterinary medicine in UEMOA region.

Country	Delivery of livestock health services	Regulatory of livestock health products	Remarks
Burkina Faso	Decree No. 96-130/PRES/PM/MARA		On the code of deontology of the veterinary profession.
	Decree No. 98/107/PRES/PM/MRA		On the attribution and exercise of sanitary veterinary mandates.
	Decree No. 98-00011/MRA		On the abolition of competition from the public sector in the provision of goods and services to farmers.
		Decree No. 98-132/PRES/PM/MRA of 6 April 1998	Relative to the regulation of veterinary pharmacy.
	Decree No. 09/266/P-RM of 2 June 2009		On the creation of a regional directorate and sub-regional veterinary services.
		Kiti No. AN VI 247/FP/SAN-S	On veterinary products – can only be marketed by the authorization of the Minister in charge of livestock.
		Kiti No. AN VII-0112/FP/AGRI-EL	On the authorisation and organisation of the private veterinary profession, including clinical, pharmacy and veterinary laboratory analysis.
	Kiti No. AN VIII-329 FP-AGRI-EL-SE-EL of 10 June 1991		Creates the veterinary board known as Ordre National des Vétérinaires (ONV).
	Kiti No. AN VII-0113/FP/AGR-EL of 22 November 1989		On the authorization and organisation to exercise the veterinary profession; on private quality; on regulation of the zoo-sanitary police in Burkina.
	Law No. 05/010 of 11 February 2005		Creating the National Direction of Veterinary Services.
	Ordinance No.70-68 bis/PRES/MSP/P/S of 28 December 1970		On the Animal Health Code.
		Regulation No. 01/2006/CM/UEMOA	Creating and defining the modalities on the functioning of the Veterinary Committee.
		Regulation No. 02/2006/CM/UEMOA	Outlines the procedures for authorization to market and supervision of veterinary drugs and establishes a regional committee of veterinary medicine.
	Zatu / Government Act of 1989, No. AN VII-16 FP-PRES of 22 November 1989		On the Animal Health Code.
	Zatu No. AN VII-0016/FP/PRES of 22 November 1989		On the Animal Health Code.
Zatu No. AN VII-16 FP-PRES of 22 November 1989		On veterinary pharmacy: prescribes the conditions for authorization and organisation to exercise veterinary profession; on private quality.	

Country	Delivery of livestock health services	Regulatory of livestock health products	Remarks
Senegal	Decree No. 2004-1623 of 15 December 2004		On the organization of the Ministry of Livestock
	Law No. 2004-16 of 4 June 2004		On agro-forestry–pastoral orientation.
	Decree No. 62-258 of 5 July 1962		On the establishment of operations of collective prophylaxis, mandatory inspection and health and safety of animal products.
	Decree No. 95-645 of 6 July 1995		Prophylactic operations have been entrusted to private veterinarians invested with a sanitary mandate.
	Law No. 92-52 of 26 June 1992		Establishing the College of Veterinarians of Senegal.
	Law No. 92-58 of 10 July 1992		On the establishment of the College of Veterinary Surgeons of Senegal
	Law No. 2008-07		Organizing the profession and the veterinary pharmacy in Senegal.
	Law No. 92-52 of 10 July 1992		Establishing the College of Veterinary Doctors of Senegal.
	Decree No. 93-514 of 27 April 1993		On the Code of deontology of Veterinary Medicine to regulate the profession.
	Decree No. 98-132/PRES/PM/MRA of 6 April 1998.		Relative to the regulation of veterinary pharmacy.
		Directive No. 07/2006/CM/UEMOA	Relative to veterinary pharmacy. The State takes all measures to ensure that only registered veterinary drugs circulate in the country.
	Ministerial Order No. 11047 of 04/12/95		On the rules for the practice of sanitary mandates in Senegal.
	Regulation No. 02/2006/CM/UEMOA	For authorization to market and the supervision of veterinary drugs, and establishing a regional committee of veterinary medicine procedures.	
Mali	Law No. 05-010 of 11 February 2005		On the establishment of the National Directorate of Veterinary Services.
	Decree No. 09-261/P-RM of 2 June 2009		On the organization and modalities of operation of the National Directorate of Veterinary Services.
	The Inter-ministerial Order No. 96-1367/MDRE-MFC-MATS-MJ of 9 September 1996		On the conditions for the granting, execution and withdrawing of sanitary mandates.

Country	Delivery of livestock health services	Regulatory of livestock health products	Remarks
Mali	Ministerial Order No. 97/1559/MDRE-MCF-MATS-MJ		Supplementing the Inter-ministerial Order No.96-1367-MDRE-MFC-MATS-MJ of 9 September 1996 on the conditions of the granting, execution and withdrawing of sanitary mandates.
	Decree No. 95-060 of 2 August 1995		Determines the offences of animal health policy in the territory of the veterinary profession.
	Decree no. 95-372/P-RM of 18 October 1995		Regulating animal health policy in the territory of the Republic of Mali.
	Inter-ministerial Order No. 96/1367/MDRE-MFC-MATS-MJGS		On the conditions for the granting, execution and withdrawal of sanitary mandates.
	Inter-ministerial Order No. 97/1559/MDRE-MFC-MATS-MJ		Supplementing the provisions of the Inter-ministerial Order No.96/1367/MDRE-MFC-MATS-MJGS on the conditions for the granting, execution and withdrawal of sanitary mandates.
	Decree No. 313/PG-RM of 2 October 1986		On the organization to exercise the veterinary profession in a private capacity.
	Law No. 88-45/AN-RM of 6 May 1988		On the establishment of the National Order of the veterinary profession.
	Law No. 94 027 of 30 April 1994		On the creation of the Central Veterinary Laboratory (Laboratoire Centrale Vétérinaire – LCV).
	Decree No. 94-266/P-RM of 8 August 1994		On the organization and modalities of the functioning of the Central Veterinary Laboratory (LCV).
	Order No. 00-039/P-RM of 20 September 2000		For the creation of the Directorate of Pharmacy and Medicine, ratified by Law No. 01-040 of 7 June 2001.
	Decree No. 01-341/P-RM of 9 August 2001		Fixing the application procedures of Law No. 01-062 of 4 July 2001 governing veterinary pharmacy.
	Law No.01-062 of 4 July 2001		On veterinary pharmacy.
	Law No.02-049 of 22 July 2002		On the law of orientation on health.
	Decree No. 04-557/P-RM of 1 December 2004		Institutes authorization to market medicines for human and veterinary uses.
	Decision No. 05/0092/MEP-SG of 2 September 2005		On the internal organization and modalities of functioning of the Central Veterinary Laboratory.
		Regulation No. 02/2006/CM/UEMOA	Procedures for authorization on the marketing and supervision of veterinary drugs and establishing a regional committee of veterinary medicine.
	Directives No. 07/2006/CM/UEMOA	Relative to veterinary pharmacy. The State takes all measures to ensure that only registered veterinary drugs circulate in the country.	

Country	Delivery of livestock health services	Regulatory of livestock health products	Remarks
Nigeria	Animal Diseases (control) Act No.10 of 1988: (1) Animal (Diseases) Law, 1978. (Oyo State); (2) Veterinary clinics (Registration) Edict, 1994 (Borno State); (3) Control of Domestic Animals law 1981 (Plateau State); (4) Government and Private Veterinary Hospital(s), Ambulatory Clinic and other (Plateau State); (5) Control of Movement of Cattle and other Animals Edict, 1994 (Abia State).		Empowers the Federal veterinary services on diseases control. 1, 2, 3, 4, 5: disease control laws for some states.
		Veterinary Establishments Accreditation and Registration Edict, 1994.	On the registration of veterinary establishments.
		Veterinary Council of Nigeria (VCN)	Regulates the veterinary profession and training.
	Nigerian Veterinary Medical Association (NVMA).		Compulsory membership.
		National Agency for Food and Drug Administration and Control (NAFDAC) Act Cap LFN No. 1, 2004.	Defines the mandate of the agency; it is in charge of the registration and control of veterinary medicines and biologicals.
		NAQS: National Agency for Quarantine Services	In charge of the border control and quarantine service.
Ghana	Diseases of Animals Act, 1961		Empowers the DVS in the control of animal diseases.
		Pharmacy and Drugs Act 1961. Food and Drugs Law, 1992 Pharmacy Act, 1994	Provide the legal framework for the registration and control of pharmaceutical activities.
	Veterinary Surgeons' Law, 1992		Established the Veterinary Council of Ghana.

Country	Delivery of livestock health services	Regulatory of livestock health products	Remarks
Cameroon	Decree No. 2000/152 of 4 May 2005		On the organization of the Ministry of Livestock, Fisheries and Animal Industries.
	Animal Diseases (control) Act No.10 of 1988 (Federal veterinary service) and State		Animal disease control.
	Decree No. 54/1053 of 18 August 1984		On the Code of Conduct for the veterinary profession.
	Decree No. 83/661 of 1983		On Medicine and Poisons; and Law No. 2000/018 of 19 December 2000 on the regulation of veterinary pharmacy.
	Law No. 90/033 of 10 August 1990		On the organization of the veterinary profession.
	Law No. 2000/017 of 19 December 2000		Regulating the veterinary health inspection.
	Law No. 2000/018 of 19 December 2000		On the regulation of veterinary pharmacy.
	Order No. 178/CAB/PM of 5 December 2008		Determines the establishment, organization and functioning of the Commission that reviews the records of requests for authorization for marketing of veterinary medicines. Regulates the importation and distribution of livestock products.



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