

# An assessment of the strengths and weaknesses of current veterinary systems in the developing world

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## Summary

The changes that veterinary services have undergone in the developing world over the last two decades are expected to continue and result in the further privatisation of selected tasks, the decentralisation of decision-making and a move towards more focus on public goods service delivery by State veterinary units. At the same time, global food consumption patterns are changing in numerous ways, which will certainly affect veterinary services delivery systems. These changes include a trend towards increasing globalisation, rapidly escalating consumer demand for animal protein, intensification of livestock production into larger units and growth of the trade of livestock and livestock products. Intensification of livestock production into larger units and global trade will increase the challenges resulting from the resurgence of serious animal diseases, food safety hazards and veterinary public health-related problems. Facing and managing these challenges raises issues related to animal health delivery systems and national policies that will have to be addressed. Strengthening the capacity of State veterinary units to respond to regulatory responsibilities dictated by national laws and international World Trade Organization and OIE (World organisation for animal health) health standards will be at the centre of animal health policies in most developing countries. Creating an environment which facilitates privatised service delivery and supports subcontracting is likely to contribute to improving economic efficiency and providing wider access to veterinary services. Equally important is the issue of professional development, which must be addressed by refocusing veterinary curricula and improving professional standards. The profession will then be in a better position to serve the needs of increasing numbers of consumers.

## Keywords

Community-based animal health worker – Developing country – Disease surveillance – Para-veterinarian – Private sector – Public sector – Trade – Veterinary public health – Veterinary service – Veterinary training.

## Introduction

The structural and fundamental changes that veterinary services in the developing world have undergone over the past two decades are expected to continue with more privatisation of services and decentralisation of decision-making. Privatisation of veterinary services was initiated in many parts of Africa and Asia as part of a broader effort to improve animal health delivery, whilst at the same time reducing State expenditure and departmental budgets. This led to a drastic shifting of responsibilities from the public to the private sector

with variable outcomes from country to country. However, only a few countries seem to have fully benefited from the ongoing process and grasped the possibilities offered by rapid changes in the market.

Animal production and health management are also changing in numerous ways that will certainly affect veterinary services delivery systems (10). These changes include a trend towards increased globalisation, greater demand for animal protein, intensification of livestock production and an increase in the trade in livestock and livestock products. Over the next two decades, the annual demand for meat and dairy products in

developing countries is expected to rise from 111 million tonnes in 1997 to 213 million tonnes in 2020 (8). The demand for milk and dairy products could rise from 194 million tonnes to 324 million tonnes per year. The intensification of livestock production and global trade will result in further challenges, due to the resurgence of serious animal diseases, food safety hazards and veterinary public health (VPH)-related problems. Whilst these changes constitute major challenges for developed and developing countries alike, developing and poor countries are particularly vulnerable. Facing and managing these challenges raises a number of issues related to animal health delivery systems and national policies that will need to be addressed.

The purpose of this paper is to briefly review the current status of veterinary services in the developing world and tentatively discuss how, in the light of changes in livestock production, they might be strengthened to improve animal health.

## The thirty-year shift in the delivery of veterinary services in Africa and Asia

In the 1970s, the public sector was responsible for providing animal health services throughout the developing world. However, budget restrictions and growing fiscal deficits in many countries have left State Veterinary Services with insufficient operating funds to fulfil their responsibilities and provide quality livestock health services (6). Several authors questioned the sustainability of the system and suggested a drastic structural reform that would result in the devolution of most of the services to the private sector, on the assumption that the latter would be likely to outperform the public sector (7, 14). This led to a drive for the privatisation of veterinary services in many developing countries in the 1980s and 1990s, with the aim of improving the delivery of animal health services whilst reducing the burden on public sector budgets. Numerous incentive schemes including decentralisation, start-up credits, transfer of government assets to private practitioners, introduction of cost recovery and the subcontracting of selected public goods and services, were designed to stimulate the privatisation process and encourage private veterinary practice.

During the 1990s, several studies raised doubts as to whether structural adjustment programmes had under-rated the public goods aspects of national veterinary services (3). There is an increasing realisation today that sector reforms have not consistently resulted in adequate delivery by the private sector and civil society of essential services and markets once provided by the State. The reasons are complex, but the result is that the

great majority of rural poor do not yet enjoy access to the range and quality of services and markets required to support a robust livestock-related livelihood (10).

## Impact of privatisation of veterinary services

Privatisation of veterinary services in the developed world has certainly improved the delivery of animal health services, but the relative success achieved should not overshadow the challenges still facing the process in many developing countries.

Experience to date indicates that the privatisation of veterinary services in Africa, especially in sub-Saharan countries, has had some positive effects, particularly as regards the availability of veterinary remedies and cost recovery. Commercialisation and distribution of veterinary remedies through the private sector has increased access to these goods and generally made them more available in countries that have privatised drug supplies (12). However, researchers in this field (5, 9) recalled that liberalisation of veterinary drug distribution has certainly increased access to remedies and vaccines but it has also led to the emergence of informal markets distributing products of dubious quality. The impact of privatisation on cost recovery and vaccination coverage has also been extensively documented (7, 9). Results are variable, but numerous reports indicate that there is no evidence of decreased vaccine coverage in countries where vaccination fees are routinely charged (7). Other examples also show that the involvement of the private sector has improved vaccination coverage and the control of epidemic diseases (9). The results obtained in some countries such as Morocco, Tunisia, Senegal, Mali and Chad, which adopted the approach of contracting out services, demonstrate that subcontracted veterinarians can be effective in the implementation of vaccination campaigns.

Privatisation has resulted in the concentration of private practice veterinarians in urban, peri-urban and high potential farming areas, leaving more marginal farming areas without proper veterinary supervision (17, 20). The impact of privatisation on small scale and resource-poor farmers has been very variable and not always evident, but recent studies in countries such as Kenya and Tanzania clearly show that the commercialisation of services and the provision of services by para-professionals do provide poor farmers with better access to veterinary services (16).

All these positive and negative effects of privatisation, as well as other constraints to the efficient delivery of veterinary services in Africa almost twenty years after privatisation, have been extensively analysed and discussed in several international forums and publications (5, 9, 11, 19). Some of the major

challenges in the delivery of livestock services in Africa are, as follows:

- the organisation of regulatory bodies
- the demarcation between public and private goods services
- the management of the transfer of services from the government to the private sector
- the delivery of animal health services in low input areas
- the provision of adequate services of an acceptable standard.

In Asia, reports suggest that the privatisation process of veterinary services in some countries, such as Indonesia and India, is promising, has the potential to grow and is gaining popularity among farmers (1, 15, 18). However, reforms required to stimulate the process had not gone far enough and had not received strong support from the State Veterinary Services, which suffer from inadequate budgets and heavily centralised planning systems. As a result, very little has changed in the systems and governments in parts of South Asia (India, Pakistan and Bangladesh) still provide the vast majority of veterinary services. The change process is particularly slow as most private goods services, including clinical activities and artificial insemination, are still heavily subsidised. In a recent study in parts of India, veterinary practice was found to be dominated by retired government practitioners, based within urban and mixed farming areas, who rely on companion animals and other activities to generate income (18). In many other parts of Asia, private clinics are reported to be unprofitable and most veterinarians are forced to engage in secondary business activities to improve their wages and sustain their primary enterprise.

## The development of a sub-professional veterinary cadre

While the delivery and privatisation of veterinary services is relatively straightforward in urban centres or high potential areas, private animal health services are more difficult to implement in more remote and marginal areas in developing countries, and this raises particular problems (9). Professionals are not willing to expand their practices and are not motivated to provide services in those areas where animals are widely dispersed and veterinary drug use is low. To overcome this major challenge, a number of community-based approaches have been attempted through donor funded projects and lending institutions in different countries to improve the delivery of animal health services in pastoral and poor areas. A common approach is to train locals to operate as community-based animal health workers (CAHWs), animal health auxiliaries (AHAs) or basic veterinary workers (BVWs), providing specific and limited activities, e.g. vaccination or basic health care (2). The CAHW system constitutes a major

development in the provision of basic veterinary care in the Low Income Food Deficit Countries, particularly in extensive livestock systems (15). After a decade of ill definition and lack of legal recognition, this system is increasingly considered as part of the private veterinary service and many countries in Africa and Asia have attempted to employ CAHWs in a productive and sustainable manner. Studies in several countries in Africa (Kenya, Tanzania, Sudan) and Asia (Philippines) show that access to such services can reduce livestock disease-related losses and improve livelihoods (16). However, the CAHW system is still a controversial issue in many countries, and there are important reservations about the quality of the services provided by CAHWs as regards accuracy of diagnosis, drug distribution, delivery of advice, obtaining assistance from professionals when required and integrating disease surveillance and control strategies. Inevitable abuses occur when CAHWs have full access to prescription and non-prescription remedies and biologicals and undertake practices for which they are not mandated. Solutions to overcome the challenges facing these systems have been documented (2) and stipulate the need for incorporating CAHWs within structures that provide technical advice, support and guidance from qualified veterinarians, as well as the need to certify and integrate them in the official veterinary workforce.

## The veterinary field units experience

In the absence of any functioning government in Afghanistan from the early 1990s, the Food and Agriculture Organization (FAO), the United Nations Development Programme (UNDP) and international non-governmental organisations (NGOs) helped to establish a field-based veterinary system to provide vaccination, deworming and therapeutic services, which by 1995 covered 75% of the country (10). The system aimed at setting up veterinary field units (VFUs) and delivering district-based animal health care services for farmers through the use of existing clinics and field-based veterinarians. Veterinarians and assistant veterinarians are supported by para-veterinarians at district level, while selected farmers are trained and designated as BVWs at village level to carry out vaccinations and simple treatments on livestock. At first, the system concentrated on improving technical standards and encouraging farmers to make greater use of animal health services. However, recognising that a fully funded free service was not sustainable, plans were made to gradually convert all VFUs into independent private clinics through the introduction of cost recovery for inputs and services and progressive reduction of VFU staff salaries. The VFU staff were contracted by the FAO/UNDP to provide public service goods such as monthly animal disease reports, supervision and training of BVWs and other periodic public goods (e.g. an animal census). This system is being introduced in other countries such as Tajikistan

to address the shortfalls in government-provided veterinary services and to improve the efficiency of animal health service delivery throughout the country.

## Stimulating empowerment

In the past, too many changes were based on the views and strategies of foreign experts, driven by bilateral donors. As a result, reforms were introduced without consultation or debate, which meant that not all stakeholders were able to contribute to defining new strategies for implementing change. If programmes of reform are to be successful, the donor community and partners of developing countries should support and adopt strategies which allow for national diversity and take into consideration differences in culture, customs and experiences. Experience gained from the recent past shows that concerted policies, which are formulated by stakeholders from all along the State – veterinarian – farmer chain, constitute one of the key steps to sectoral growth and sustainability. Constituted associations of veterinary professionals and unions of producers/farmers are needed and their creation is to be greatly encouraged.

## Veterinary services and increasing trade in livestock and livestock products

It is anticipated that the increasingly globalised economy will provide growing opportunities in many developing countries for trade in livestock and livestock products. Successfully meeting the challenges of this demand-driven development in the livestock industry depends largely on having a healthy and productive livestock population. Livestock performance in turn relies on well functioning and high quality veterinary services capable of satisfying international rules and standards. With this in mind, accepting that the control of epidemic animal and trade-related diseases, and the obligation to manage and report on these diseases, is an international public good, is imperative (10).

An important mission, which until now has been the responsibility of government Veterinary Services, is the reinforcement of disease reporting and surveillance as part of the general strengthening of early warning systems for major reportable diseases. Reports made on several occasions indicate that the quality of the information collected in the majority of countries is far from satisfactory, due partly to lack of government resources allocated for such activities. This disease surveillance information, communicated to specialised international authorities such as the OIE (World organisation

for animal health) and other international agencies like the FAO remains, in the majority of cases, insufficient to allow bordering countries, or those with which the affected country conducts trade in animals and animal products, to take necessary measures in time to prevent the spread of diseases. The quality of information remains the essential parameter on which all efforts must focus to improve disease reporting and surveillance systems. Significantly, one of the major activities of the FAO European Commission for the Control of Foot and Mouth Disease (FMD) is building regional co-operation and networking systems for the control and surveillance of FMD so as to prevent incursion of FMD viruses into European countries from Turkey and the Near-East through the Balkans and from the Caucasus through Russia and the countries of the Commonwealth of Independent States.

A particular case that poses a major challenge to trade in animals and animal products is the provision of animal health care in pastoral areas. To compensate for the limited participation of the private sector in low potential farming and more remote areas in East Africa and some parts of Asia, the sub-professional veterinary cadre, including CAHWs, para-veterinarians and auxiliaries has increased dramatically. This trend has successfully improved basic animal health care and the prophylactic use of drugs. High quality veterinary services are probably not required at this level, but if these areas also support livestock production for export, a reliable system of certification of sanitary quality assurance, including the control of the movement of animals, will have to be implemented. In these cases, it is legitimate to question whether or not BVWs, who remain the only providers of animal health services in many pastoral areas in countries in East Africa, are knowledgeable enough for this responsibility. As mentioned previously, supervision of CAHWs by a qualified veterinary professional (probably through contracting services) would have to be considered to ensure sustainability and at the same time protect public and trade activities from sub-standard service.

With this in mind, the FAO supports capacity-building sub-regional projects in Djibouti and parts of Ethiopia and Somalia, which are important areas of quality livestock rearing and export to the Arabian Peninsula. The 'Support of Livestock Exports from the Horn of Africa' project intends to establish the safe export of small ruminants from the Horn of Africa (Saudi Arabia banned imports from these countries in late 2001). The aim of the project is to create a controlled chain for the movement of live small ruminants from origin to export destination with the animals undergoing health inspections periodically along the chain. This grass-roots level quality assurance system could become the basis for rebuilding government Veterinary Services which are responsive to the requirements of livestock raisers, traders and importing nations alike.

## Establishment of a viable veterinary practice

One of the positive outcomes of World Trade Organization (WTO) Structural Adjustment Programme initiatives is that the concept of private veterinary activities is no longer anathema in developing countries. Major strides have been made to encourage the development of the private sector, especially in urban areas and in the field of veterinary remedy distribution. However, not enough has been done to stimulate the emergence of rural private veterinary practices. Private veterinarians are more successful in and near urban areas, where clients mainly own commercial dairy, poultry and fattening enterprises.

The immediate transfer of all on-farm services from national services to either the private sector or NGOs and limiting the role of national Veterinary Services to regulatory and control activities are likely to stimulate private veterinary practices. Continuous support, particularly in low input areas, through direct subsidies, credit facilities and especially by subcontracting the private sector to undertake the actual delivery of selected public goods under State control should create a vibrant and sustainable private veterinary practice. A considerable part of the financial resources devoted to the execution of certain tasks by State services should be able to be transferred to the private sector. The results obtained in some countries such as Chad, Morocco and Senegal, which adopted the approach of government subcontracts for services, showed the extent to which subcontracted veterinarians can be effective in the implementation of vaccination campaigns to the economic benefit of the State. Indeed, proper subcontracting leads to a significant decrease of the costs budgeted by the State for carrying out the same activities. Other important initiatives for promoting the private sector and creating a favourable environment include the clear demarcation and definition of the roles of the public and private sectors, better regulations for the sale of veterinary drugs and the enforcement thereof, the creation and promotion of farmer co-operatives or unions, and the elimination of unfair competition from government veterinarians and non approved or supervised community-based services. National legislation should evolve to permit the development of various types of veterinary enterprises, depending on the regions where they are created, headed by veterinarians or trained veterinary assistants, and incorporating auxiliaries under the direct supervision of veterinarians.

## Disease surveillance and the challenge for Veterinary Services in developing countries

Control and surveillance of epidemic diseases to maintain high health status is largely a public good. Evidence to date suggests

this is best carried out by State Veterinary Services with centralised management, substantial financial resources, sufficient implementing capacity and good infrastructure. However, the combination of poor financial resources and an inadequately organised national Veterinary Service has often resulted in the deterioration of public animal health services, with epidemic diseases frequently spreading unchecked. The recent occurrence in many parts of Africa and Asia of major animal diseases such as FMD, African swine fever, contagious bovine pleuropneumonia (CBPP) and Rift Valley fever (RVF) can often be related to the breakdown of national Veterinary Services. This shows that changes are required to implement both public and private benefit interventions and to improve the design and performance of delivery systems, particularly as regards disease control and surveillance.

There is an increasing realisation that maintaining sufficient implementing capacity for epidemiological surveillance to analyse the evolution of animal diseases and monitor the effectiveness of national disease control and eradication programmes is a major challenge for Veterinary Services in many developing countries. After several decades of controlling rinderpest, the majority of countries in western and central Africa began to proceed along the OIE pathway, aiming at declaring freedom from the disease. This process requires that Veterinary Services discontinue vaccination and set up surveillance networks to provide evidence of the absence of the disease and to protect their countries against a possible re-introduction thereof. The emergence of new variants of FMD virus, the resurgence and unchecked spread of CBPP in parts of Africa, the recent surveillance of RVF in Mauritania, the development of a co-ordinated programme for control and surveillance of brucellosis in North Africa and the Near East, and the development of national surveillance programmes for bovine spongiform encephalopathy (BSE) are all cases in point of active surveillance and constant monitoring. As trends in disease surveillance become apparent, Veterinary Services in developing countries will have to develop their planning and implementing capacity for effective disease surveillance and consider the possibilities of involving the private sector, local community and livestock owners. In the light of increasing privatisation of livestock services, professionals in many developing countries have called for a re-definition of the responsibilities of the public sector, and particularly those related to the epidemiological surveillance of animal diseases. It is argued that it would be legitimate, and highly advantageous, if private professionals, who are closer to developments in the field, played a role in national epidemiological networks for disease surveillance, under the co-ordination and control of the official Veterinary Services. In some countries, such as Senegal, pilot projects have been implemented with the help of donors with a view to involving not only mandated veterinarians, but also livestock owners in disease surveillance programmes (4). The process is still under experimentation and determining whether the approach will be successful is impossible at the present time.

## Control of the use of veterinary medicines

With the intensification of livestock production, the rapid expansion of the poultry industry and the improvement of the dairy and meat sectors, there has been a significant increase in the use and distribution of veterinary medicines. The regulatory process has also changed drastically, with requirements for testing products prior to their marketing being much more stringent. This situation will be exacerbated by the lifting of the tariff barriers pursuant to the agreements of the WTO. To keep pace with these developments, Veterinary Services have attempted to elaborate or update their legal and policy frameworks for quality control and registration of veterinary products, but much still has to be done in many parts of Africa and Asia. The establishment and reinforcement of regulatory bodies with formal procedures that aim mainly at ensuring the quality of circulating veterinary drugs and controlling their residues in foodstuffs and other livestock products is the only way to overcome irregularities with regards to the distribution and use of drugs in developing countries.

## Veterinary public health services delivery

The emergence and re-emergence of zoonotic diseases and increasing concerns among communities about food safety issues have resulted in a new focus on government guarantees to consumers and trade partners in livestock products. In response to these trends, there have been structural changes in service delivery in many developed countries, with the objective of establishing and promoting veterinary public health programmes (21). Governments in most developing countries are slowly becoming interested in these programmes, but social, economic and cultural obstacles and perceptions may limit commitment to VPH. The delivery of VPH services is largely a public good, in which State Veterinary Services, through an interdisciplinary approach, can play an active role. However, the implications of the increasing privatisation of veterinary services in many developing countries on VPH service delivery should be taken into consideration.

## Improving professional development

### **Refocusing veterinary educational programmes**

The status of the professional veterinarian and the ability to provide an effective service that meets both livestock owner

expectations and national and international animal health standards has become a central question for all countries where privatisation of veterinary services has commenced. Whilst the need for 'veterinary administrators' was reduced as official Veterinary Services were depleted, the need for veterinary practitioners escalated. There have been claims that veterinary schools in many developing countries in Africa lack proper veterinary curricula and sufficient veterinary practices where new graduates can be exposed to field work and receive good practical training (5, 9). As a result, new graduates who, because of structural adjustment policies, were forced to create jobs or enter the private sector, found themselves facing professional insertion problems and were not well prepared for employment.

To address the problem of appropriate veterinary training and make it more relevant to the present situation, veterinary schools must develop reform strategies to adjust and tailor their curricula to maintain the quality of the training, reinforce the relevance of veterinary practice for current farming systems and fill the deficiency that exists in the public animal health care system in most developing countries. In the light of new and future trends in livestock production, there is a need for training curricula to provide more focus on practical work and to expand into areas like epidemio-surveillance, production medicine, economics and business management. It is equally important that veterinary educational programmes do not overlook the need to develop the ability of veterinary graduates to engage in effective dialogue with livestock owners and local stakeholders and to address problems specific to different livestock systems and productions, including resource-poor and smallholder farmers.

### **Strengthening administration of the public sector**

The success of privatisation depends largely on the existence of strong State veterinary administrations with the required competent and experienced human resources in terms of organisation, regulation and control. In developing countries, there are few or no postgraduate programmes for State veterinary medicine and professional development opportunities are rare. Consequently, there is a lack of academic-based experience in organising and managing State Veterinary Services. This problem may be addressed by requesting that donors help by sponsoring regional and joint postgraduate programmes and specialised training, which will result in high levels of professionalism and expertise.

## Conclusion

While privatisation of veterinary services and promotion of the private sector is desired in many developing countries as a way of increasing economic efficiency and providing better access to

services, the public sector still has an essential role to play. State Veterinary Services are part of the regulatory and organisational infrastructures of governments and should be reorganised around these responsibilities to ensure better animal health protection and compliance with national laws and WTO and OIE standards. However, a number of national policies and development issues need to be addressed if trends in animal production and health are to be met. This will require empowering professionals and farmers, strengthening the links of the State – veterinarian – farmer chain, reviewing legal and policy frameworks, strengthening the capacity of State Veterinary Services, ensuring quality control monitoring of the private system and promoting professional training and education.

Veterinary Services in developing countries will have to promote activities that contribute to improving all livestock sectors, including the delivery of animal health services in pastoral and marginalised areas. Creating a favourable environment for privatised service delivery, implementing and ensuring compliance with the requirements of international agreements and conventions and dealing with trade-related diseases, as well as VPH, should be at the centre of animal health policies and delivery systems.

## Évaluation des forces et des faiblesses des systèmes vétérinaires actuels dans les pays en développement

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### Résumé

Les changements qui sont intervenus dans les services vétérinaires des pays en développement au cours des deux dernières décennies devraient se poursuivre et entraîner la privatisation de certaines tâches, la décentralisation de la prise de décision et une plus grande attention accordée par les organismes vétérinaires d'État à la prestation de services d'intérêt public. Dans le même temps, la consommation alimentaire mondiale subit de nombreuses transformations dont les effets ne manqueront pas de se faire sentir sur les systèmes de prestation de services vétérinaires. Ces changements comprennent un renforcement de la tendance à la mondialisation, un accroissement rapide de la demande des consommateurs en protéines animales, l'intensification de l'élevage en grandes unités, ainsi que la progression des échanges commerciaux d'animaux et de produits d'origine animale. L'intensification de l'élevage dans de plus grandes unités de production et la mondialisation des échanges commerciaux entraîneront de nouveaux défis liés à la réapparition de maladies animales graves, aux dangers pour la sécurité sanitaire des aliments et aux problèmes de santé publique vétérinaire.

Ces défis ne pourront être relevés en ignorant les problèmes soulevés par les systèmes de prestation de services de santé animale et les politiques nationales. Le renforcement de la capacité des Services vétérinaires d'État à assumer les responsabilités réglementaires imposées par la législation nationale et les normes internationales de l'Organisation mondiale du commerce et de l'OIE (Organisation mondiale de la santé animale) sera au cœur des politiques de santé animale dans la plupart des pays en développement. La création d'un climat propice à la prestation de services privatisés et à la sous-traitance contribuera vraisemblablement à améliorer la rentabilité économique et à élargir l'accès aux services vétérinaires. La question tout aussi cruciale du développement des

compétences professionnelles devra être traitée en recentrant les cursus vétérinaires et en relevant le niveau des normes professionnelles. Les vétérinaires seront ainsi mieux armés pour répondre aux besoins d'un nombre croissant de consommateurs.

#### **Mots-clés**

Auxiliaire communautaire de santé animale – Échange commercial – Formation vétérinaire – Paravétérinaire – Pays en développement – Santé publique vétérinaire – Secteur privé – Secteur public – Service vétérinaire – Surveillance des maladies.



## **Evaluación de los puntos fuertes y débiles de los sistemas veterinarios actuales en los países en desarrollo**

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#### **Resumen**

Es de prever que los cambios experimentados en los dos últimos decenios por los servicios veterinarios de los países en desarrollo tengan continuidad y se traduzcan en una profundización de la privatización de ciertas tareas, la descentralización de los procesos decisorios y la dedicación de las unidades veterinarias estatales a la prestación de servicios de interés público. Paralelamente, los patrones mundiales de consumo alimentario están sufriendo muchos cambios, que sin duda influirán en los sistemas de prestación de servicios veterinarios. Entre esos cambios destacan la tendencia a una mundialización cada vez más extendida, el veloz aumento de la demanda de proteínas animales por parte de los consumidores, la intensificación de la producción pecuaria en explotaciones de mayor tamaño y el auge del comercio de ganado bovino y sus derivados. Estos dos últimos factores acrecentarán las dificultades causadas por la reaparición de graves enfermedades animales, peligros relativos a la higiene de los alimentos y problemas de salud pública veterinaria.

A la hora de afrontar y manejar esas dificultades se plantean una serie de cuestiones ligadas a los sistemas y las políticas de atención zoonosanitaria a las que es preciso dar respuesta. En la mayoría de los países en desarrollo, un elemento central de la política zoonosanitaria será la mejora de la capacidad de las unidades veterinarias estatales para asumir las responsabilidades reglamentarias que se les asignan tanto en la legislación nacional como en las normas internacionales de la Organización Mundial del Comercio y la OIE (Organización mundial de sanidad animal). Es probable que la creación de un contexto que facilite la prestación de servicios privatizados y apoye la subcontratación contribuya a mejorar la eficacia económica y a mejorar el acceso a servicios veterinarios. Igual importancia reviste el tema del desarrollo de las aptitudes profesionales, que debe abordarse reorientando los programas de estudios veterinarios y mejorando el nivel de las normas profesionales. La profesión podrá así responder mejor a las necesidades de los consumidores cada vez más numerosos.

#### **Palabras clave**

Comercio – Formación veterinaria – Países en desarrollo – Paraveterinario – Personal zoonosanitario de ámbito comunitario – Salud pública veterinaria – Sector privado – Sector público – Servicio veterinario – Vigilancia de enfermedades.



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